

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
JULY 10, 2023
6:30 P.M.
AGENDA**

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

DECLARATION OF CONFLICT OF INTEREST:

CALL TO THE PUBLIC: (Note: The Board reserves the right to not begin new business after 10:00 p.m.)

OLD BUSINESS:

OPEN PUBLIC HEARING # ... (REQUESTED TO BE POSTPONED UNTIL THE SEPTEMBER 11, 2023 PLANNING COMMISSION MEETING) Consideration of special land use application, environmental impact assessment and sketch plan to allow for a proposed Bed and Breakfast located at 7854 Collingwood Drive, just west of Grand River Avenue. The request is petitioned by Nazmiye Yapici.

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment (5-14-23)
- C. Recommendation of Sketch Plan (5-17-23)

NEW BUSINESS:

OPEN PUBLIC HEARING #2... Consideration of a rezoning application, amendment to the Latson Road PUD Agreement, Environmental Impact Assessment and conceptual PUD Plan for a proposed rezoning and conceptual plan approval to expand the existing Planned Unit Development. The rezoning request is from Country Estates (CE) to Interchange Campus Planned Unit Development (CAPUD) and Interchange Commercial Planned Unit Development (ICPUD) for approximately 138 acres of undevelopment land. The request involves parcel 4711-09-300-046 which is located at the southeast intersection of Latson Road and Beck Road. The remaining parcels are located south of Crooked Lake Road and west of Latson Road consisting of the following parcel ID#s: 4711-17-200-006, 4711-17-200-002, 4711-17-400-015, 4711-17-400-013, and 4711-17-400-014. The request is petitioned by Todd Wyatt.

- A. Recommendation of rezoning
- B. Recommendation of PUD Agreement Amendment
- C. Recommendation of Environmental Impact Assessment (6-21-23)
- D. Recommendation of Conceptual PUD Plan (5-31-23)

OPEN PUBLIC HEARING #3... Consideration of a Zoning Ordinance Text amendment to Article 11 of the Zoning Ordinance, entitled "Solar Energy Collectors and Commercial Solar Energy Systems".

- A. Recommendation of Zoning Ordinance Amendment to Article 11 entitled "Solar Energy Collectors and Commercial Solar Energy Systems.

ADMINISTRATIVE BUSINESS:

- *Staff Report*
- *Approval of June 12, 2023 Planning Commission meeting minutes*
- *Member discussion*
- *Adjournment*

*Citizen's Comments- In addition to providing the public with an opportunity to address the Township Board at the beginning of the meeting, opportunity to comment on individual agenda items may be offered by the Chairman as they are presented. Anyone speaking on an agenda item will be limited to 2 minutes.

ITEM #1- COLLINGWOOD BED AND BREAKFAST

**APPLICANT HAS REQUESTED TO BE POSTPONED
UNTIL THE SEPTEMBER 11, 2023 PLANNING
COMMISSION MEETING.**



GENOA CHARTER TOWNSHIP
Application for Re-Zoning

APPLICANT NAME: Todd Wyett ADDRESS: 326 E 4th St, Royal Oak 48067
OWNER NAME: Todd Wyett ADDRESS: _____
PARCEL #(s): See Attached Map PRIMARY PHONE: (248) 770-8484
EMAIL 1: todd@versacos.com EMAIL 2: elord@atwell-group.com

We, the undersigned, do hereby respectfully make application to and petition the Township Board to amend the Township Zoning Ordinance and change the zoning map of the township of Genoa as hereinafter requested, and in support of this application, the following facts are shown:

A. REQUIRED SUBMITTAL INFORMATION

1. A legal description and street address of the subject property, together with a map identifying the subject property in relation to surrounding properties;
2. The name, signature and address of the owner of the subject property, a statement of the applicant's interest in the subject property if not the owner in fee simple title, and proof of consent from the property owner;
3. It is desired and requested that the foregoing property be rezoned from:
CE to CAPUD and ICPUD
4. A site plan illustrating existing conditions on the site and adjacent properties; such as woodlands, wetlands, soil conditions, steep slope, drainage patterns, views, existing buildings, sight distance limitations, relationship to other developed sites, and access points in the vicinity;
5. A conceptual plan demonstrating that the site could be developed with representative uses permitted in the requested zoning district meeting requirements for setbacks, wetland buffers access spacing, any requested service drives and other site design factors;
6. A written environmental impact assessment, a map of existing site features as described in Article 18 describing site features and anticipated impacts created by the host of uses permitted in the requested zoning district;
7. A written description of how the requested rezoning meets Sec. 22.04 "Criteria for Amendment of the Official Zoning Map."
8. The property in question shall be staked prior to the Planning Commission Public Hearing.

B. DESCRIBE HOW YOUR REQUESTED RE-ZONING MEETS THE ZONING ORDINANCE CRITERIA FOR AMENDING THE OFFICIAL ZONING MAP:

1. How is the rezoning consistent with the goals, policies and future land use map of the Genoa Township Master Plan, including any subareas or corridor studies. If not consistent, describe how conditions have changed since the Master Plan was adopted?

The majority of the property within the PUD lies west of Latson Rd and consists of a large portion of the property designated as CAPUD in the Zoning Ordinance and Master Plan. The remaining area within the PUD is located east of Latson Rd and is generally planned for ICPUD, all of which is consistent with the vision of the Master Plan.

2. Are the site's physical, geological, hydrological and other environmental features suitable for the host of uses permitted in the proposed zoning district?

Yes. The area will be served by public utilities and comply with County requirements for stormwater management.

Topography is not severe, so reasonable development conditions are expected.

3. Do you have any evidence that a reasonable return on investment cannot be received by developing the property with one (1) of the uses permitted under the current zoning?

Given the construction of the Latson Road interchange, it is not reasonable to assume the area would be developed in its current designation of CE (Country Estate).

4. How would all the potential uses allowed in the proposed zoning district be compatible with surrounding uses and zoning in terms of views, noise, air quality, the environment, density, traffic impacts, drainage and potential influence on property values?

The intensity of the uses will reduce as development progresses south from the interchange. The proposed design guidelines of the PUD places certain restrictions on lighting and buffers between adjacent uses.

5. Are infrastructure capacity (streets, sanitary sewer, water, and drainage) and services (police and fire protection, etc.) sufficient to accommodate the uses permitted in the requested district?

Upgrades to water and sewer infrastructure including extension to the area is needed and design/construction is underway in anticipation of development of the area.

Traffic conditions are being analyzed and anticipate some intersection improvements.

6. Is there a demonstrated demand in Genoa Township or the surrounding area for the types of uses permitted in the requested zoning district? If yes, explain how this site is better suited for the zoning than others which may be planned or zoned to accommodate the demand.

There is demand for the types of uses proposed at this site. The fact that such a large land area under single ownership at a newly constructed interchange to I-96 presents a unique opportunity than elsewhere in the community.

7. If you have a particular use in mind, is another zoning district more appropriate? Why should the Township re-zone the land rather than amend the list of uses allowed in another zoning district to accommodate your intended use?

The Township has a vision in mind for development of this area, as described in the Master Plan which anticipates a mixture of uses. The proposed rezoning and PUD will allow a high quality development in accordance with that vision.

8. Describe any deed restrictions which could potentially affect the use of the property.

None.

C. AFFIDAVIT

The undersigned says that they are the owner (owner, lessee, or other specified interest) involved in this petition and that the foregoing answers and statements herein contained and the information herewith submitted are in all respects true and correct to the best of his/her knowledge and belief.

BY: Todd Wyett

ADDRESS: 326 E 4th Street, Royal Oak MI 48067

SIGNATURE

The following contact should also receive review letters and correspondence:

Name: Eric Lord Email: elord@atwell-group.com

Business Affiliation: Engineer

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

PROJECT NAME: _____

PROJECT LOCATON & DESCRIPTION: Latson Road south of I-96

SIGNATURE: _____

DATE: 7/31/19

PRINT NAME: Todd Wyett

PHONE: (248) 770-8484

COMPANY NAME & ADDRESS: Versa Real Estate



GENOA CHARTER TOWNSHIP
Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: Todd Wyett 326 E. 4th Street, Royal Oak, MI 48067
If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: Todd Wyett 326 E. 4th Street, Royal Oak, MI 48067

SITE ADDRESS: _____ PARCEL #(s): See Attached

APPLICANT PHONE: (248)770-8484 OWNER PHONE: (248)770-8484

OWNER EMAIL: todd@versacos.com

LOCATION AND BRIEF DESCRIPTION OF SITE: _____

The site is located south of the Latson Road Interchange with I-96 and as far south as Crooked Lake Road. The site lies on 336 +/- acres of existing agricultural land.

BRIEF STATEMENT OF PROPOSED USE: _____

The area west of Latson Rd is intended for high tech/light industrial use with a transitional area of residential on the south . The area east of Latson is intended for supportive commercial use.

THE FOLLOWING BUILDINGS ARE PROPOSED: To be determined.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: Todd Wyett

ADDRESS: 326 E. 4th Street, Royal Oak, MI 48067

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Todd Wyett of Versa Real Estate at todd@versacos.com
Name Business Affiliation E-mail Address
Eric Lord Atwell Group elord@atwell-group.com

Brad Strader

MKSK

bstrader@mkskstudios.com

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE: _____

DATE: _____

PRINT NAME: Todd Wyett

PHONE: (248) 770-8484

ADDRESS: 326 E. 4th Street, Royal Oak MI 48067



GENOA CHARTER TOWNSHIP APPLICATION Planned Unit Development (PUD)

APPLICANT NAME: _____

APPLICANT EMAIL: _____

APPLICANT ADDRESS & PHONE: 326 E. 4th St. Royal Oak 48067 , (248)771-8484

OWNER'S NAME: _____

OWNER ADDRESS & PHONE: 326 E. 4th St. Royal Oak 48067 , (248)771-8484

TAX CODE(S): _____

QUALIFYING CONDITIONS (To be filled out by applicant)

1. A PUD zoning classification may be initiated only by a petition.
2. It is desired and requested that the foregoing property be rezoned to the following type of PUD designation:

<input type="checkbox"/> Residential Planned Unit Development (RPUD)	<input checked="" type="checkbox"/> CAPUD
<input type="checkbox"/> Planned Industrial District (PID)	<input checked="" type="checkbox"/> ICPUD
<input type="checkbox"/> Mixed Use Planned Unit Development (MUPUD)	
<input type="checkbox"/> Redevelopment Planned Unit Development (RDPUD)	
<input type="checkbox"/> Non-residential Planned Unit Development (NRPUD)	
<input type="checkbox"/> Town Center Planned Unit Development (TCPUD)	
3. The planned unit development site shall be under the control of one owner or group of owners and shall be capable of being planned and developed as one integral unit.

EXPLAIN _____

4. The site shall have a minimum area of twenty (20) acres of contiguous land, provided such minimum may be reduced by the Township Board as follows:
 - A. The minimum area requirement may be reduced to five (5) acres for sites served by both public water and public sewer.
 - B. The minimum lot area may be waived for sites zoned for commercial use (NSD, GCD or RCD) where the site is occupied by a nonconforming commercial, office or industrial building, all buildings on such site are proposed to be removed and a new use permitted within the underlying zoning district is to be established. The Township Board shall only permit the PUD on the smaller site where it finds that the flexibility in dimensional standards is necessary to allow for innovative design in redeveloping the site and an existing blighted situation will be eliminated. A parallel plan shall be provided showing how the site could be redeveloped without the use of the PUD to allow the Planning Commission to evaluate whether the modifications to dimensional standards are the

minimum necessary to allow redevelopment of the site, while still meeting the spirit and intent of the ordinance.

- C. The PUD site plan shall provide one or more of the following benefits not possible under the standards of another zoning district, as determined by the Planning Commission:
- preservation of significant natural or historic features
 - a complementary mixture of uses or a variety of housing types
 - common open space for passive or active recreational use
 - mitigation to offset impacts
 - redevelopment of a nonconforming site where creative design can address unique site constraints.
- D. The site shall be served by public sewer and water. The Township may approve a residential PUD that is not served by public sewer or water, provided all lots shall be at least one (1) acre in area and the requirements of the County Health Department shall be met.

Size of property is +/- 332 _____ acres.

DESCRIBE BELOW HOW THE REQUESTED PUD DESIGNATION COMPLIES WITH AFOREMENTIONED MINIMUM LOT SIZE REQUIREMENTS.

The total project area exceeds the minimum 20 acre requirement.

STANDARDS FOR REZONING TO PLANNED UNIT DEVELOPMENT (RESPOND HERE OR WITHIN THE IMPACT STATEMENT)

1. How would the PUD be consistent with the goals, policies and future land use map of the Genoa Township Master Plan, including any subarea or corridor studies. If conditions have changed since the Master Plan was adopted, the consistency with recent development trends in the area;

The majority of the property within the PUD lies west of Latson Road, and consists of a large portion of the land designated as CAPUD in the Zoning Ordinance and Master Plan. The remaining area within the PUD is located east of Latson Road and is generally planned for ICPUD in the Master Plan, all of which is consistent with the vision of the Master Plan.

2. The compatibility of all the potential uses in the PUD with surrounding uses and zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic impacts, aesthetics, infrastructure and potential influence on property values;

The Latson Rd interchange was built in 2013, which provided an opportunity to create a well planned mixed use area in accordance with the vision of the Master plan. The proposed PUD carries out that vision, as described in further detail in the proposed PUD design guidelines and impact assessment.

3. The capacity of infrastructure and services sufficient to accommodate the uses permitted in the requested district without compromising the “health, safety and welfare” of the Township;

The development team has worked closely with the Township, MHOG and County to fund the design and construction of water and sewer utility extensions to serve the area. The capacity of the public utility system to serve development in this area has been studied and planned for.

Recent improvements to the waste water treatment facility have also been performed to accommodate development of the area.

4. The apparent demand for the types of uses permitted in the PUD;
Given the newly constructed interchange on I-96, which is a highly traveled express way
transportation corridor, and proximity to Ann Arbor, Lansing and metro Detroit
market, there is significant demand for the uses proposed.

AFFIDAVIT

The undersigned says that they are the owner (owner, lessee, or other specified interest) involved in this petition and that the foregoing answers and statements herein contained and the information herewith submitted are in all respects true and correct to the best of his/her knowledge and belief.

BY: _____

ADDRESS: 326 E. 4th St., Royal Oak 48067

Contact Information - Review Letters and Correspondence shall be forwarded to the following:
Todd Wyett of Versa Real Estate at todd@versacos.com
Name Business Affiliation E-mail

ERIC LORD ATWELL, LLC ELORD@ATWELL-GROUP.COM
BRAD STRADER MKSK BSTRADER@MKSKSTUDIOS.COM

FEE EXCEEDANCE AGREEMENT
As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

PROJECT NAME: _____
PROJECT LOCATON & DESCRIPTION: Latson Road south of I-96
SIGNATURE: _____ DATE: 5/31/2023
PRINT NAME: Todd Wyett PHONE: (248) 770-8484
COMPANY NAME & ADDRESS: Versa Real Estate, 326 E 4th Street, Royal Oak 48067



**NOTICE OF PUBLIC HEARING – JULY 10, 2023
(REZONING AND PUD AMENDMENT)**

June 23, 2023

To Whom It May Concern:

Please be advised that the Planning Commission of Genoa Charter Township will conduct a public hearing on **Monday, July 10, 2023 commencing at 6:30 p.m.** As required by state law, you are receiving this notice because you have been identified as an owner or occupant of real property within 300 feet of the subject parcels.

The applicant is requesting a proposed rezoning and an amendment to the Latson Road Planned Unit Development agreement. The rezoning request is from Country Estates (CE) to Interchange Campus Planned Unit Development (CAPUD) and Interchange Commercial Planned Unit Development (ICPUD) for approximately 138 acres of undeveloped land. The request involves parcel 4711-09-300-046 which is located at the southeast intersection of Latson Road and Beck Road. The remaining parcels are located south of Crooked Lake Road and west of Latson Road consisting of the following parcel ID#s: 4711-17-200-006, 4711-17-200-002, 4711-17-400-015, 4711-17-400-013, and 4711-17-400-014. The request is petitioned by Todd Wyett.

Please map on the reverse side to locate the parcels that are proposed to be rezoned.

You are invited to attend this hearing. Members of the public will be able to speak during the public hearing portions of the meeting. If, prior to the meeting, members of the public have certain questions or wish to provide input on any business that will be addressed at the meeting then such persons may contact the Planning Commissioners through email to amy@genoa.org, or by mail at 2911 Dorr Road, Brighton, Michigan 48116.

Genoa Charter Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities at the meeting/hearing upon seven (7) days' notice to the Township. Individuals with disabilities requiring auxiliary aids or services should contact the Township in writing or by calling at (810) 227-5225.

Sincerely,

Amy Ruthig,
Planning Director

2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

SUPERVISOR

Bill Rogers

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

Jean W. Ledford

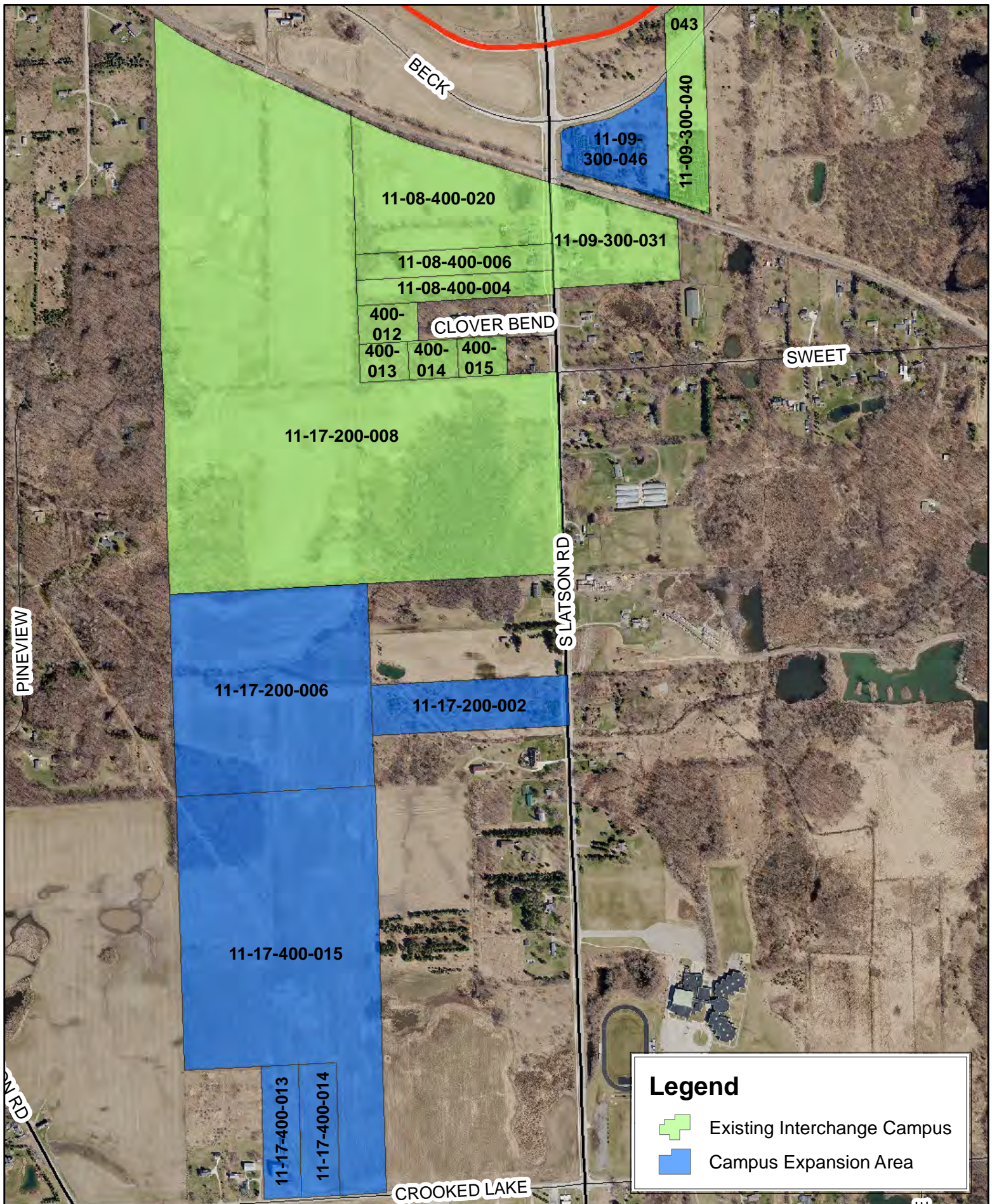
H. James Mortensen

Terry Croft

Diana Lowe

MANAGER

Kelly VanMarter



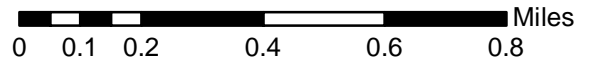
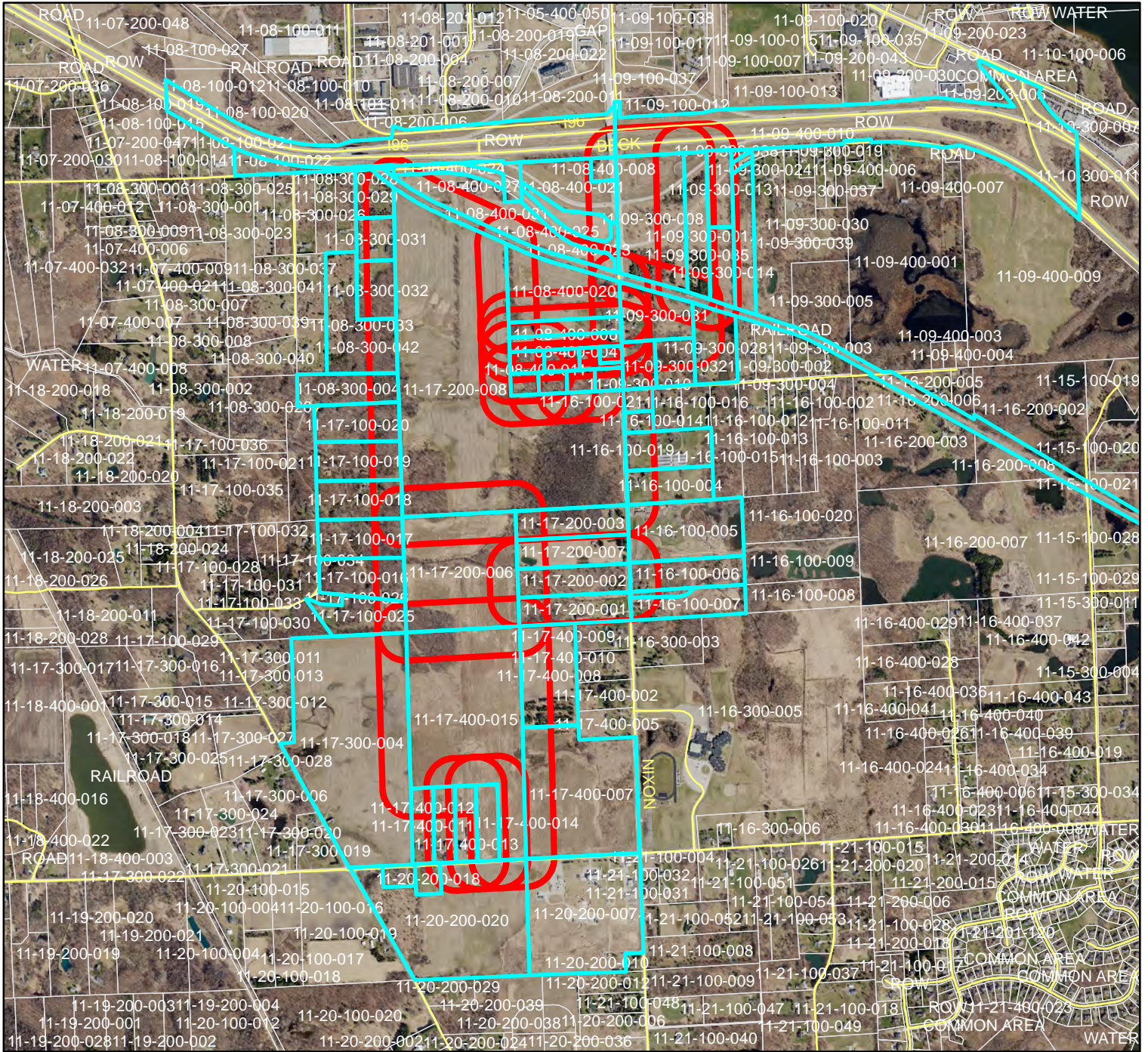
1 inch = 800 feet

Parcel lines are approximate.
Not intended for survey purposes.

S. Latson Development Area



300 Foot Buffer for Noticing



S. Latson Development Area

Genoa Township

Parcels: 09-300-008, 09-300-001, 09-300-031,
08-400-020, 08-400-004, 08-400-012, 08-400-013,
08-400-014, 08-400-015, 17-200-008, 17-200-006,
17-200-002, 17-400-015, 17-400-013, 17-400-014

Meeting Date: July 10, 2023



June 21, 2023

CARL R. HAUSS, PLLC
Attorney & Counselor at Law
16880 Hauss
Eastpointe, MI 48021
(586) 854-5078
Email: Haussoflaw@sbcglobal.net

July 2, 2023

Mrs. Kelly VanMarter
Manager- Genoa Township
2911 Dorr Road
Brighton, MI 48116

Dear Kelly:

Re: Vacant Land-Todd Wyett & Versa Development- Rezoning & PUD Amendment
Approximately 138 acres, Genoa Township, Michigan

Vacant Land-L H & M, LLC -Genoa Township, Michigan.
Approximately 42.6 acres

I am writing on behalf of L H & M, LLC, the property owner adjoining to the south and east of Mr. Wyett's property. We are in receipt of the June 23, 2023 Genoa Township Planning Department letter relative to Todd Wyett's rezoning request and PUD amendment for approximately 138 acres, including the area generally west of Latson Road and north of Crooked Lake Road.

After many years of effort and significant investment, Todd Wyett's request stands to positively impact the immediate, surrounding properties, as well as the Township as a whole, Livingston County, and perhaps- the State of Michigan in terms of land use and economic development.

The expansion of the CAPUD and ICPUD zoning classification and attendant uses to the areas north of Crooked Lake Road and west of Latson Road seem reasonable. As significant property owners adjacent to Mr. Wyett's property and being situated in the same Latson Interchange transition zone, we request that the Township consider similar, reasonable Campus expansion and its attendant/accessory uses- for L H & M, LLC's 42.6 acres, at the intersection of Latson and Crooked Lake Roads.

We have no objection to the proposed use of Mr. Wyatt's property, provided that the Township reserve an equally appropriate number of REU's for Campus and attendant/accessory uses including multifamily residential use as it relates to LH & M, LLC's 42.6 acre site.

Please contact me at your convenience should you have any questions or comments, need additional information, or desire to schedule a meeting.

We look forward to working with you on this important endeavor.

Sincerely,

Carl R. Hauss



July 5, 2023

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Amy Ruthig, Planning Director
Subject:	Versa Development/Innovation Interchange – PUD Expansion (Review #2)
Location:	Latson Road, between Crooked Lake Road and I-96 (approximately 138 acres)
Zoning:	CE Country Estate

Dear Commissioners:

At the Township’s request, we have reviewed the revised submittal (PUD Design Guidelines dated 6/20/23) from Versa Development requesting PUD rezoning and conceptual plan review for approximately 132 acres of undeveloped land generally along Latson and Beck Roads, between Crooked Lake Road and I-96.

A. Summary

1. PUD Qualifying Conditions (Section 10.02):

- a. Based on our review of the revised submittal, the Ordinance standards are generally met.
- b. The applicant must address any technical comments provided by the Township Engineer and/or Utilities Director under this criterion.

2. Rezoning Criteria (Section 22.04):

- a. The proposed zoning designations of ICPUD and CAPUD are consistent with the Future Land Use Map and goals of the Township Master Plan.
- b. The applicant must address any technical comments provided by the Township’s engineering consultant, Utilities Director and/or Brighton Area Fire Authority.
- c. Rezoning is necessary to implement the vision and goals of the I-96/Latson Road Subarea Plan.
- d. We suggest clarification/additional discussion on the “auto services” and “self storage” uses as part of this PUD.

3. Conceptual PUD Plan (Section 10.03.06):

- a. The applicant has addressed the comments from our initial review letter.
- b. The PUD Agreement needs to incorporate language addressing compatible uses, per Section 10.03.06(c)2(c).
- c. The PUD Agreement needs to incorporate language addressing expansion into the future transition area, per Section 10.03.06(i).
- d. The applicant must address staff and/or Township Attorney comments on the restated and amended PUD Agreement.
- e. The applicant must address any comments provided by the Township’s engineering consultant and/or the Livingston County Road Commission with respect to the Traffic Impact Study.
- f. The proposal includes changes to the previously approved gateway/development highway sign, which is subject to Planning Commission approval.



Aerial view of site and surroundings (looking east)

B. Proposal/Process

The request is to expand the existing Interchange Planned Unit Development for approximately 132 acres of land generally along Latson and Beck Roads, between Crooked Lake Road and I-96.

The project includes approximately 129 acres (identified as the “Southwest Area”) proposed as an Interchange Campus PUD (CAPUD), as well as approximately 9 acres along Beck Road proposed as an Interchange Commercial PUD (ICPUD).

The concept plan identifies the Beck Road property as a “Commercial Area,” while the “Southwest Area” is intended for additional high-tech/light industrial land, as well as open space and mixed-density residential uses.

At this time, the applicant seeks Planning Commission consideration of the expanded PUD rezonings, amended conceptual PUD plan, Environmental Impact Statement and draft/amended PUD Agreement.

Following a public hearing, the Commission may put forth recommendations on each component to the Township Board, who has final approval authority.

C. Qualifying Conditions

We have reviewed the proposal in accordance with the PUD Qualifying Conditions (Section 10.02), as follows:

- 1. Single Ownership.** The PUD application form states that the is under single ownership via 3 separate, yet affiliated LLCs.
- 2. Initiated by Petition.** The request has been initiated appropriately.
- 3. Minimum Site Area.** The expansion area contains approximately 132 acres, which exceeds the minimum standard of 20 acres. If the expansion is granted, the full PUD property will be in excess of 330 acres.
- 4. Benefits.** The overall project includes cohesive development of high tech, (clean) light industrial, office, retail and residential uses across more than 300 acres of undeveloped land.

The PUD will provide for a complementary mix of uses, enhanced streetscaping, pedestrian and vehicular connectivity, and open space amenities.

5. Sewer and Water. Utility extensions are required and proposed as part of this project.

The applicant must address any technical comments provided by the Township's engineering consultant and/or Utilities Director under this criterion.

D. Rezoning Criteria

We have reviewed the proposal for compliance with the Criteria for Amendment of the Official Zoning Map (Section 22.04), as follows:

1. *Consistency with the goals, policies and future land use map of the Genoa Township Master Plan, including any subarea or corridor studies. If conditions have changed since the Master Plan was adopted, the consistency with recent development trends in the area.*

The Township Master Plan and Future Land Use map identify the Latson Road property (123 acres) as Interchange Campus, while the Beck Road property (9 acres) is planned as Interchange Commercial.

The PUD zoning designations sought are consistent with the Future Land Use Map.

Furthermore, the submittal references the Master Plan goal of addressing missing middle housing via the residential component to the PUD.

2. *Compatibility of the site's physical, geological, hydrological and other environmental features with the host of uses permitted in the proposed zoning district.*

The original PUD includes preservation of an approximately 27-acre wooded wetland. The conceptual PUD Plan identifies additional open space areas that will be preserved in the "Southwest Area."

Based on the materials submitted, including the updated Environmental Impact Assessment, we do not foresee any issues under this criterion; however, the applicant must address any concerns raised by the Township's engineering consultant.

3. *The ability of the site to be reasonably developed with one (1) of the uses permitted under the current zoning.*

With the construction of the Latson Road interchange several years ago, the Master Plan was amended to include an I-96/Latson Road Subarea Plan.

The Plan was developed with an understanding that the new interchange would create development opportunities not allowed under CE zoning (which is how much of the area is/was zoned).

Accordingly, the Township's vision for this area cannot be accomplished under CE zoning.

4. *The compatibility of all the potential uses allowed in the proposed zoning district with surrounding uses and zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic impacts, aesthetics, infrastructure and potential influence on property values.*

The potential uses allowed in the Interchange PUD designations (CAPUD and ICPUD) are listed in Section 10.03.06(c) of the Zoning Ordinance.

The PUD Agreement includes a general description of the uses intended for each geographic area (Section 3), as well as a specific table of allowable uses (Exhibit 6). The major change in the amended PUD Agreement is the inclusion of residential uses for the "Southwest Area."

However, we suggest clarification/additional discussion on the following:

- “Auto services” as a permitted use in the Mixed Use Area. The applicant should clarify what this entails. The conventional Ordinance allows “minor auto repair” (SLU in GCD and RCD) and “auto/gasoline service station” (SLU in RCD). These uses are also subject to specific conditions (Section 7.02.02k), which should apply to the PUD.
- “Self storage” as a permitted use in the Commercial Area. The conventional Ordinance allows “climate-controlled indoor commercial storage” (SLU in GCD and RCD) and “mini-storage” uses (IND uses). These uses are also subject to specific conditions (Section 7.02.02z and 8.02.02j, respectively), which should also apply to the PUD. If the Township is amenable to climate controlled indoor commercial storage, that use could be a fit; however, we do not believe mini-storage should be allowed in this PUD.

5. *The capacity of Township infrastructure and services sufficient to accommodate the uses permitted in the requested district without compromising the "health, safety and welfare" of the Township.*

The applicant must address any comments provided by the Township engineering consultant, Utilities Director and/or Brighton Area Fire Authority related to this criterion.

6. *The apparent demand for the types of uses permitted in the requested zoning district in the Township in relation to the amount of land in the Township currently zoned to accommodate the demand.*

As referenced above, the Township has planned for this area to be developed as an Interchange PUD in accordance with the I-96/Latson Road Subarea Plan.

7. *Where a rezoning is reasonable given the above criteria, a determination the requested zoning district is more appropriate than another district or amending the list of permitted or Special Land Uses within a district.*

Similar to previous comments, we believe a rezoning is reasonable/necessary to implement the I-96/Latson Road Subarea Plan.

The vision/goals for this area cannot be achieved under existing or amended CE regulations.

8. *The request has not previously been submitted within the past one (1) year, unless conditions have changed or new information has been provided.*

No rezoning requests for the project area have been submitted in the past year.

E. Conceptual PUD Plan

We have reviewed the proposal for compliance with the Interchange PUD standards (Section 10.03.06), as follows:

- 1. Land Use.** Uses in the original PUD were carefully evaluated and refined over a series of meetings. Exhibit 6 includes a use table for each geographic area, and, as previously noted, the most noticeable change is the inclusion of residential uses in the “Southwest Area.”

It is worth noting that the submittal does reference the Master Plan goal of addressing missing middle housing via the proposal for residential uses within the PUD.

Beyond those uses inherently allowed in an Interchange PUD, the Ordinance allows the Township to grant additional similar and/or compatible land uses.

As such, we request the applicant incorporate language into the PUD Agreement that demonstrates compliance with Section 10.03.06(c)2(c) with respect to compatible land uses.

As previously noted, additional information is needed with respect to “auto services” and “self storage” uses.

- 2. Dimensional Standards.** Similar to previous comments, the primary change with respect to dimensional standards is related to the inclusion of residential uses.

The varying types of residential (attached townhome, fourplex stacked, apartment, single family, and senior housing) generally follow the dimensional standards of the MDR, HDR and SR Districts.

- 3. Site Design.** Similar to the original PUD, the design guidelines include extensive site design requirements for the development in terms of landscaping, lighting, connectivity, and amenities.

The primary change is the inclusion of residential design and landscaping requirements.

Overall, site amenities include a Township gateway and development identification signage, pedestrian/trail connections, bicycle racks, electric vehicle charging stations and spaces for outdoor seating/gathering.

- 4. Architecture.** Similar to the original PUD, the design guidelines provide detailed descriptions of the building design and material requirements for the development, as well as photographic examples.

We did not identify any significant changes to the non-residential architectural/material requirements. As such, the changes are related to the inclusion of residential architecture/material requirements.

- 5. Access Management and Connectivity.** The submittal includes streetscape plans depicting 3 drives on the west side of Latson, 1 drive on the east side of Latson, and a connection to Crooked Lake Road.

Access points on the same side of the road are to be separated by at least 500 feet. Though an exact dimension is not provided, the new driveway on the east side of Latson meets this standard.

The project includes vehicular connections throughout, while a trail connection and walkways are provided for pedestrian connectivity.

The applicant must address comments provided by the Township’s engineering consultant and/or Brighton Area Fire Authority.

- 6. Utilities.** The current (and original) Impact Assessment includes conceptual utility plans. We defer technical review to the Township’s engineering consultant, Brighton Area Fire Authority and Utilities Director.

- 7. Future Transition Area.** The “Southwest Area” is within the future transition area.

The Ordinance has specific provisions to evaluate the expansion – Section 10.03.06(i).

Though the original PUD Agreement allows for expansion (since the applicant purchased additional land adjacent to the original PUD area), we request the PUD Agreement address compliance with the provisions of the Zoning Ordinance.

8. PUD Agreement. The submittal includes an Amended and Restated PUD Agreement.

As previously noted, we request the applicant address compatible uses and expansion into the future transition area within the PUD Agreement.

Lastly, the applicant must address any comments provided by staff or the Township Attorney.

9. Impact Assessments. The submittal includes an updated Environmental Impact Assessment (dated June 21, 2023). The requested edits are addressed in the revised submittal.

The submittal also includes an updated Traffic Impact Study (dated May 31, 2023).

The applicant must address comments provided by the Township's engineering consultant and/or the Livingston County Road Commission.

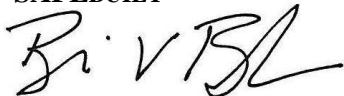
10. Additional Considerations. Page 24 of the Design Guidelines includes modifications to the previously approved gateway/development highway signage. In general, the size, height and design are consistent; however, the materials have changed with the removal of the vertical stone element.

This proposed change is subject to Planning Commission approval.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully,

SAFEBUILT



Brian V. Borden, AICP
Michigan Planning Manager



July 5, 2023

Ms. Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Latson Road - Versa PUD Amendment
Conceptual Site Plan Review No. 1**

Dear Ms. Ruthig:

Tetra Tech conducted a second site plan review of the Versa PUD conceptual plans, impact assessment, and traffic study submitted on June 20, 2023. The plans and impact assessment were prepared by MKSK, Atwell LLC, and Fleis & Vanderbrink on the behalf of Todd Wyett and Latson Partners LLC. The traffic impact study was prepared by Fleis & Vanderbrink. The original 200-acre PUD was previously approved, and the applicant is now proposing to expand the PUD to include an additional 129 acres of property to the south of the original PUD, and an additional 9 acres on the west side of Latson Road, along Beck Road north of the railroad tracks. We offer the following comments:

GENERAL

1. The site plan provided is very conceptual and all future developments within the PUD will need to have their own site plan review and approval.

SANITARY AND WATER SERVICES

1. The impact assessment notes that the PUD will be serviced by water and sewer services through MHOG and GO-SWATH. Water and sanitary sewer extension to the south side of I-96 has been completed in anticipation of the proposed development. Furthermore, the expanded PUD area was already included in the assumptions made when completing the basis of design for the South Latson Road Water and Sewer improvements.
2. The impact assessment shows that future water main improvements will extend water main down Latson Road to Crooked Lake Road with the 12-inch water main looped within future development. These improvements will need to be included in future site plans as the PUD develops.
3. Figures 2 and 3 in the impact assessment are outdated and no longer show existing infrastructure accurately. Some of the water main and force main shown as proposed is now existing. These figures also don't match with the latest concepts that the Township has, which have been attached separately for reference. The impact assessment and concept plans should provide more detail on how the proposed expansion area will be served with water and sanitary sewer service, including updated concepts or alternatives on how water and sewer would be routed to the entire PUD area.

DRAINAGE AND GRADING

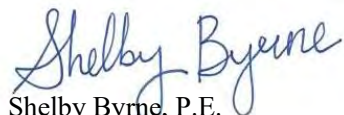
1. The impact assessment states that a stormwater management plan will be prepared for the entire development. The master plan will have central detention facilities. The detention sizing should be determined based on the entire site to ensure that there will be proper storm management as the property develops rather than developing individual stormwater management plans for each new building. The site naturally drains to the Marion Genoa Drain that is a county maintained and operated drain. The LCDC office will need to be included in the stormwater master plan development process.

TRAFFIC AND ROAD CONCEPTS

1. The general layout of the on-site roadways and intersections with Latson Road appear to be well thought out and provide for circulation through the site. The final layout may vary from this concept once end users of the sites are determined.
2. A detailed traffic impact study was completed for the proposed amended PUD. The proposed development is anticipated to cause multiple intersections in the study area to operate at level of service E or F with the increase in traffic. The traffic impact study includes a list of recommended improvements to mitigate the increase in traffic in section 11. These improvements will need to be considered by the Township as the PUD develops in the future. Any site drive or intersection recommendations should be included in future site plans for approval.
3. Improvements to Latson Road are subject to LCRC approval and should be submitted for review and comment by the Township. Since this parcel is the first major development on the south side of Latson, and as such is the gateway to Genoa Township, we recommend additional concepts be considered to promote the township with either monument signage or landscaping details as part of the overall development plan.
4. The Innovation Interchange preliminary Latson Road concepts show one of the site driveways lined up directly with Sweet Road. The property directly to the west of Sweet Road is not within the proposed PUD area, so lining up the intersection will not be possible as shown.

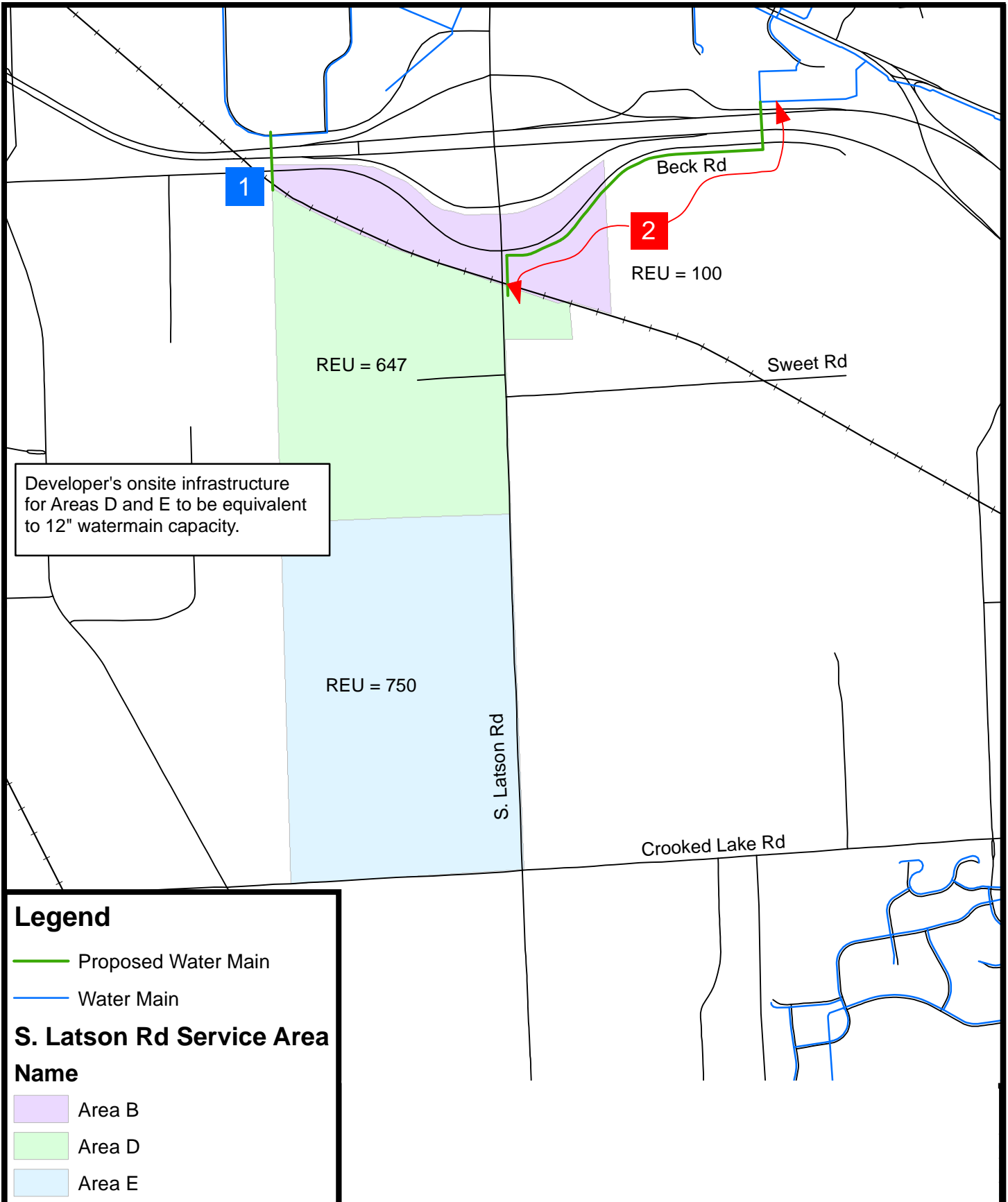
Given the conceptual nature and limited detail of the plans, it is difficult to perform an engineering review. Our general findings are presented above. These should be discussed with the applicant and planning commission and any comments incorporated in future submittals.

Sincerely,



Shelby Byrne, P.E.
Project Engineer

Attachments (separate electronic documents)



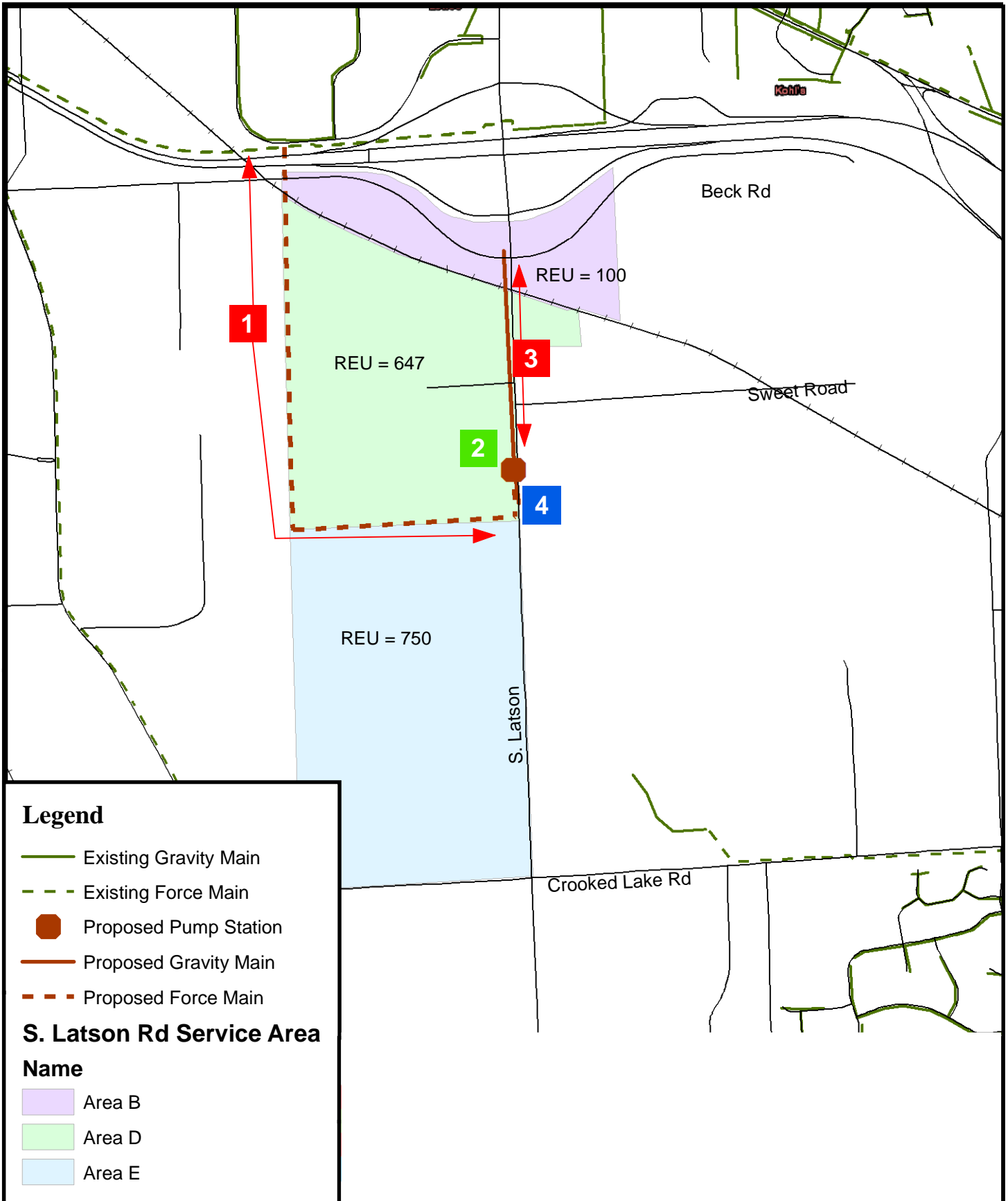
1 inch = 1,500 feet

Figure 1
Water Distribution Infrastructure

Date: 3/2/2018

Note: This is a graphical representation of the required improvements. Final routing and location will be required during the design phase.





COMMUNITY IMPACT ASSESSMENT

LATSON ROAD PLANNED UNIT DEVELOPMENT

June 21, 2023



Prepared By:



In accordance with Section 18.07 of the Genoa Township Zoning Ordinance, this impact assessment describes the Versa property, the intended land uses, the potential impacts, and design features to minimize the negative impacts. Given the size of the property and the range of potential land uses, some portions of this report are general in nature. More specific assessments will be provided when more detailed site plans are submitted for a specific project or phase.

While most of the northern half of the PUD will be designated as an employment center for office, research, light industrial and warehousing uses, there is a small area on the east side of Latson Road designated for commercial uses. The scale of the commercial development is intended to meet the needs of employees and visitors to the employment center, while also cater to the existing and planned residential areas of the PUD to the south, and quick on-and-off trips by motorists along I-96.

18.07.01 Preparer.

This statement was prepared by Bradley Strader, AICP, Principal Planner, MKSK and Eric Lord, P.E., Vice President, Atwell. A traffic impact study will be submitted separately, prepared by Julie Kroll of Fleis & Vandenbrink.

MKSK

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Eric Lord, Vice President
elord@atwell-group.com

FLEIS & VANDENBRINK

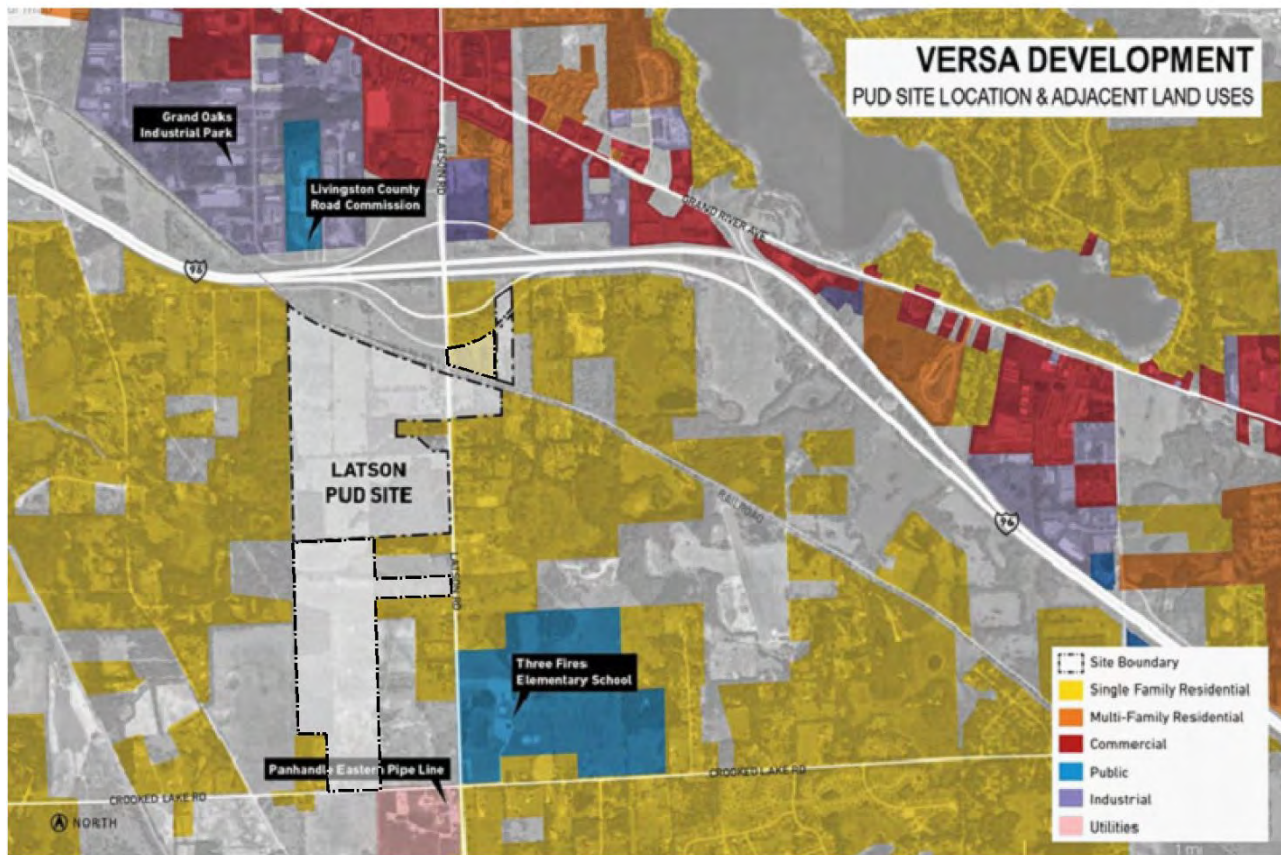
27725 Stansbury St #195
Farmington Hills, MI 48334
(248) 536-0080
Julie Kroll, Traffic Services
Group Manager
jkroll@fveng.com

18.07.02 Location.

The project site includes ±332 acres and is located south of the I-96 Interchange and the railroad tracks, primarily along the western side of Latson Road. The site wraps around several properties that front the west side of Latson Road that are not part of the PUD. There is also ±10 acre area that fronts the east side of Latson Road (please refer to site location and land use map on the following page). The areas north of the site along Latson and extending along Grand River Avenue includes an extensive amount of regional type commercial developments and some higher density residential. Properties adjacent to the PUD site are primarily large lot single-family homes. Further south of the PUD is a Pipeline plant and elementary school, as illustrated on the location and land use map.

The following parcels are included in the PUD:

- 11-08-400-004
- 11-08-400-006
- 11-08-400-012
- 11-08-400-013
- 11-08-400-014
- 11-08-400-015
- 11-08-400-020
- 11-09-300-031
- 11-09-300-040
- 11-09-300-043
- 11-09-300-046
- 11-17-200-002
- 11-17-200-006
- 11-17-200-008
- 11-17-400-013
- 11-17-400-014
- 11-17-400-015



18.07.03 Impact on Natural Features.

The subject property is comprised of approximately 332 acres of land, of which 293 acres is situated west of Latson Road and 38 acres is located east of Latson Road. Much of the ± 293 acre area west of Latson Road is active farmland. The Marion Genoa Drain bisects the subject property and ultimately receives runoff from much of the site. The topography generally slopes from north to south and from south to north in the direction of the drain across approximately 50 feet of fall, with typically moderate slopes of 2-5%..

The primary natural feature asset of the property is a ± 27 -acre wooded area located along the west side of Latson Road, north of the Marion Genoa Drain. Within the wooded area is a low-lying State regulated wetland that appears to connect through the adjacent property to the south before merging with the Marion Genoa County Drain. This large area provides a natural buffer and screening from the rear of the proposed development to Latson Road. We view this wooded wetland area as a natural asset to the development that is intended to be preserved.

A second wooded area approximately six acres in size is located further west of the 27 acre wooded area, a portion of which contains a wetland. The regulatory status of this wetland is unknown currently. Topography within this wooded area slopes to the southwest, which is where a large portion of surface runoff exits the site on its way to the Marion Genoa Drain. Because this is a low point of the site, a detention basin in this general area is anticipated to contain runoff from the developed site prior to discharge. We anticipate that several of the trees will be impacted in this area as a result, though efforts will be made to maintain a buffer to the neighboring properties. The intent of the development is to avoid impacts to this wetland area.

A low-lying area also exists west of Latson Road along the west property line toward the northern middle of the site. An approximately 0.8-acre wetland of unknown regulatory status exists in this area, which collects localized runoff prior to exiting the site to the west. The intent of the development is to avoid impacts to this wetland area.

South of the Marion Genoa Drain a third wooded area approximately nine acres in size is located along the west property line. Within the wooded area is a low-lying State regulated wetland that appears to flow along the west property line before merging with the Marion Genoa County Drain. This large area provides a natural buffer and screening between the residential and light industrial components of the PUD as well as providing desirable open space for the residents. We view this wooded wetland area as a natural asset to the development that is intended to be preserved.

A single-family home exists on the property immediately east of Latson Road. The property is primarily open, with some evidence of prior farming activity. A few small stands of trees exist on the property, and there is no evidence of wetland. Topography generally and gradually slopes from north to southeast across the property. We anticipate this property to be developed for commercial use, and as such will likely see impacts to the trees located in the interior of the site, though opportunities will be explored to preserve trees around perimeter property lines where possible.

18.07.04 Impact on Stormwater Management.

The topography west of Latson Road is such that there are three primary drainage patterns for surface runoff north of the Marion Genoa Drain. The northwest portion of the property drains south to the existing wetland pocket along the middle of the west property line. From there runoff will enter the neighboring site to the west on its way ultimately to the Marion Genoa Drain. The lower middle area of the subject property (north of the drain) contains a high point from which water is diverted to the southwest corner of the property and to the southeast corner. Both drainage patterns result in water running through adjacent parcels to the south and ultimately ending in the Marion Genoa Drain, which is under Livingston County jurisdiction.

The topography west of Latson Road, south of the Marion Genoa Drain has two primary drainage patterns created by a north-south ridge that generally divides the property in two. The western drainage pattern flows to the large wooded area along the west property line before flowing to the drain. The eastern drainage pattern flows onto the neighboring properties before ultimately reaching the drain.

The topography east of Latson Road generally drains from north to south and continues south to and through a series of low-lying areas and potential wetlands on adjacent property. This area is part of the drainage district for the Marion Genoa Drain.

According to the USDA Natural Resources Conservation Service Soils information, the subject area west of Latson Road is primarily comprised of Wawasee and Miami Loam soil, which is classified as a soils group C. Soils of this type experience low to moderate infiltration with stormwater typically saturating the soil before running off toward lower areas. High groundwater is not anticipated. These soil types do not generally limit development of land.

As previously described, there is a fair amount of grade change to the property particularly west of Latson Road. Development of the property will be designed to maintain similar drainage patterns to what occurs now. A stormwater management system will be designed for the development in accordance with the requirements of the Livingston County Drain Commissioner's office, which will include:

- Water quality measures
- Stormwater detention sized for the 100-year storm event
- Soil erosion control

We anticipate the detention basins will be strategically located at or near the existing low points of the property where stormwater is currently leaving the site. The basins will retain the water for a period with a restricted release to maintain the current drainage patterns from the property. As mentioned earlier, the subject area is tributary to the Marion Genoa Drainage District which is the ultimate receiving water course.

A soil erosion control permit will be obtained prior to construction from Livingston County which will require the site to be managed to control erosion created by construction activity. Examples of erosion control measures that are typically deployed during site development include:

- Silt fencing and vegetative buffer strips to keep soil contained within the construction area.
- Mud Mats at construction entrances to avoid tracking onto public roads.
- Inlet protection – silt sacks in catch basins to avoid sediment buildup in storm pipes and ponds.
- Stone Rip Rap – at culvert outlets to reduce scour and erosion.
- Seed and mulch – of graded areas to promote vegetation growth, which is key to controlling erosion. established.

18.07.05 Impact on Surrounding Land Use.

The Genoa Township Master Plan (2023) designates the Latson Road corridor south of the new I-96 Interchange as an area to concentrate new development, with a goal of an “Interchange Campus.” Uses contemplated in the Master Plan include research and development facilities, corporate offices, a conference center and hotel, and restaurants and other services that are complementary to the overall development. The site is within the Growth Boundary and designated as a “Primary Growth Area” in the Master Plan. South of the “Interchange Campus” area is what is described in the Master Plan as a “Transitional Area” which anticipates residential use.

The proposed PUD accommodates those types of uses but with the addition of some light industrial and warehousing uses in the Interchange Campus area. The developer notes that there is significant demand in Livingston County for such uses, and that this location in Genoa Township is very appealing given the proximity to the well-designed I-96 interchange (as compared to many complex freeway interchanges in the county). These types of light industrial uses can also be designed to promote a campus setting, with a median along Latson Road, entryways, quality architecture, landscaping, pathways, consistent signage, and other attractive features. In addition, these types of uses can help stimulate development of some of the other uses desired by the Township, such as corporate offices and R & D centers.

As shown on the concept plan, described in the Design Guidelines, and as prescribed in the PUD Agreement, a number of provisions are included to help ensure the development is compatible with the surrounding area. These include:

- Preserved or landscaped buffers adjacent to residential areas.
- Most of the anticipated traffic to and from future development will use the I-96 interchange and higher density development will occur closer to the interchange, helping to minimize traffic impacts to the surrounding area.
- An extensive streetscape and potentially a median along Latson Road to provide an attractive gateway to the PUD and Southern Genoa Township
- Standards for high quality architectural design for facades visible to the public, including from I-96.
- Lighting standards to help preserve the existing “dark sky” environment.
- The multi-family residential component will serve as a transitional buffer to the lower density residential properties to the south.

All of the development is intended to comply with the operational requirements and performance measures in the Genoa Township Zoning Ordinance. More details regarding types of proposed uses, hours of operation, noise for particular uses, activity during construction periods, etc. will be provided once individual site plans are submitted for development.

18.07.06 Impact on Public Facilities and Services.

This section covers the anticipated broad impacts of the Development. Individual uses and site plans submitted in the future may need to provide more information on their particular impacts, depending upon the use. For example, water and sewer needs may vary for a particular use.

Generally, the main impacts will be traffic and public water and sewer, as noted in the sections below. In terms of employees, this will vary depending upon the types of sizes of the individual site plans. It is expected that the impacts on police, fire, emergency response and other Township or County services will be minimal. The tax benefits of the development will provide a high benefits-to-impact ratio, which will benefit the Township.

18.07.07 Impact on Public Utilities.

To provide public water and sanitary sewer service to the subject area south of I-96, public extension of those utilities is required. The initial stage to bring utilities to the south side of I-96 has been complete in accordance with the permitted design plans prepared by Tetra Tech.. From there, utilities will be extended south along Latson Road as well as through the development area to service the district. Water service will be provided by the Marion, Howell, Oceola & Genoa Sewer and Water Authority (MHOG). Sanitary sewer service will be provided by the Genoa Oceola Sewer and Water Authority (GO).

A 12-inch water main, serviced by MHOG, has been extended in two locations: from Grand Oaks Drive across I-96 to the northwest corner of Latson Farm parcel south of the railroad tracks and from Kohl's across I-96 to Beck Road then west to Latson and south to the northeast corner of the Latson Farms parcel south of the railroad tracks. Once the developments in the South Latson Road area are constructed, the internal watermain will complete the loop.

Sanitary sewer within the proposed South Latson Road development area will consist of gravity sewers that flow to a proposed pump station located along the west side of Latson Road approximately 2,500 feet south of the railroad tracks. A force main will extend north from the pump station along the west line of the subject property and cross under I-96 before tapping into the existing sanitary system at Grand Oaks Drive. The area is ultimately serviced by the GO WWTP, which has recently received system capacity upgrades and is able to service the anticipated load from the South Latson Road development area.

Each development proposed within the South Latson Road area will be serviced by public water and sewer, designed to local, County and State requirements. Approximately 1,450 Residential Equivalent Units (REU) is anticipated for the South Latson Road development area MHOG standards equate one REU to 250 gallons per day for average daily demand.

Franchise utilities serving the South Latson Road area will include gas, electric, telephone and data. Coordination with those utility providers to bring service to the area will continue as development plans progress.

Please see the Water Distribution Infrastructure and Sanitary Sewer Collection Infrastructure Maps in Appendix.

18.07.08 Storage and Handling of any Hazardous Materials.

The northern development area west of Latson Road is primarily anticipated for light industrial and office use, subsequently there are no specific plans for storing of significant hazardous materials. The proposed gas

station east of Latson Road will contain underground fuel storage tanks which will comply with all local, County, State and Federal requirements. Each development proposed within the subject area will be responsible for meeting all storage and handling requirements, as applicable.

18.07.09 Traffic Impact Study.

Note: A separate traffic impact study is being prepared and will be submitted separately. The study area and contents of this study are being coordinated with the Livingston County Road Commission with a focus on the potential cross section for Latson Road (such as a median), its design, and the preferred location for access points to the PUD.

The relatively new I-96 interchange at Latson Road was designed for future volumes including potential new development to the south. Recent counts indicated Latson Road had average daily traffic volumes of 10,650 trips per day, so it has ample capacity to accommodate traffic for the early phases of the Development. New counts are being conducted as part of the traffic impact study process.

The PUD will accommodate a range of uses including a small commercial area and various types of office, R&D and light industrial uses, as well as residential components. Using the ITE Trip Generation manual, the average trips per day that can be expected are approximately 3,000 trips per day for the commercial zone and approximately 5,000-16,000 trips per day for the employment center. The office and R&D uses would be at the high end of the scale, light industrial and warehousing at the lower end.

Given the site's proximity to the new interchange, most of its traffic is expected to travel to or from that interchange. Therefore, the focus of the traffic analysis is on the future design of Latson Road to meet the daily and peak hour volumes when the PUD and other nearby areas are developed. This will include the future cross section, including the right-of-way required, to meet the future traffic volumes while also serving as an attractive gateway to the Development and Southern Genoa Township. In addition to the aesthetic benefits of a median, it would ease pedestrian crossings and improve safety.

There are pros and cons to various longer-term options for Latson Road. Two concepts for a Latson Road median are shown. One is a narrow median that would replace the center turn lane for segments where left turns would not need to be accommodated. The second shows a wider 30-foot median which would provide more room for queuing turning vehicles but would require more right-of-way. Other options could include an even wider median to allow for indirect left turns, or a typical center turn lane with no median. Preferred locations of access points and potential traffic signals or roundabouts will be described. Results of the traffic analysis may suggest adjustments to the access points shown on the concept plan. In some cases, there may need to be a short and a longer-term design when dealing with features such as the offset from the intersection at Sweet Road.

18.07.10 Historic and Cultural Resources.

Three of the homes in the proposed development area were built in 1958 and thus are more than 50 years old. However, those homes are not included on the State or National Historic Registers.

18.07.11 Special Provisions.

The PUD Agreement contains several provisions regarding the uses, operations, design and other standards that will apply to the Development and future site plans and owners.

Sources:

- Genoa Township Master Plan
- I-96 Interchange Environmental Impact Statement
- Conversations with the Township and Livingston County Road Commission staff

Appendix:

- Figure 1: Water Distribution Infrastructure Map
- Figure 2: Sanitary Sewer Collection Infrastructure Map

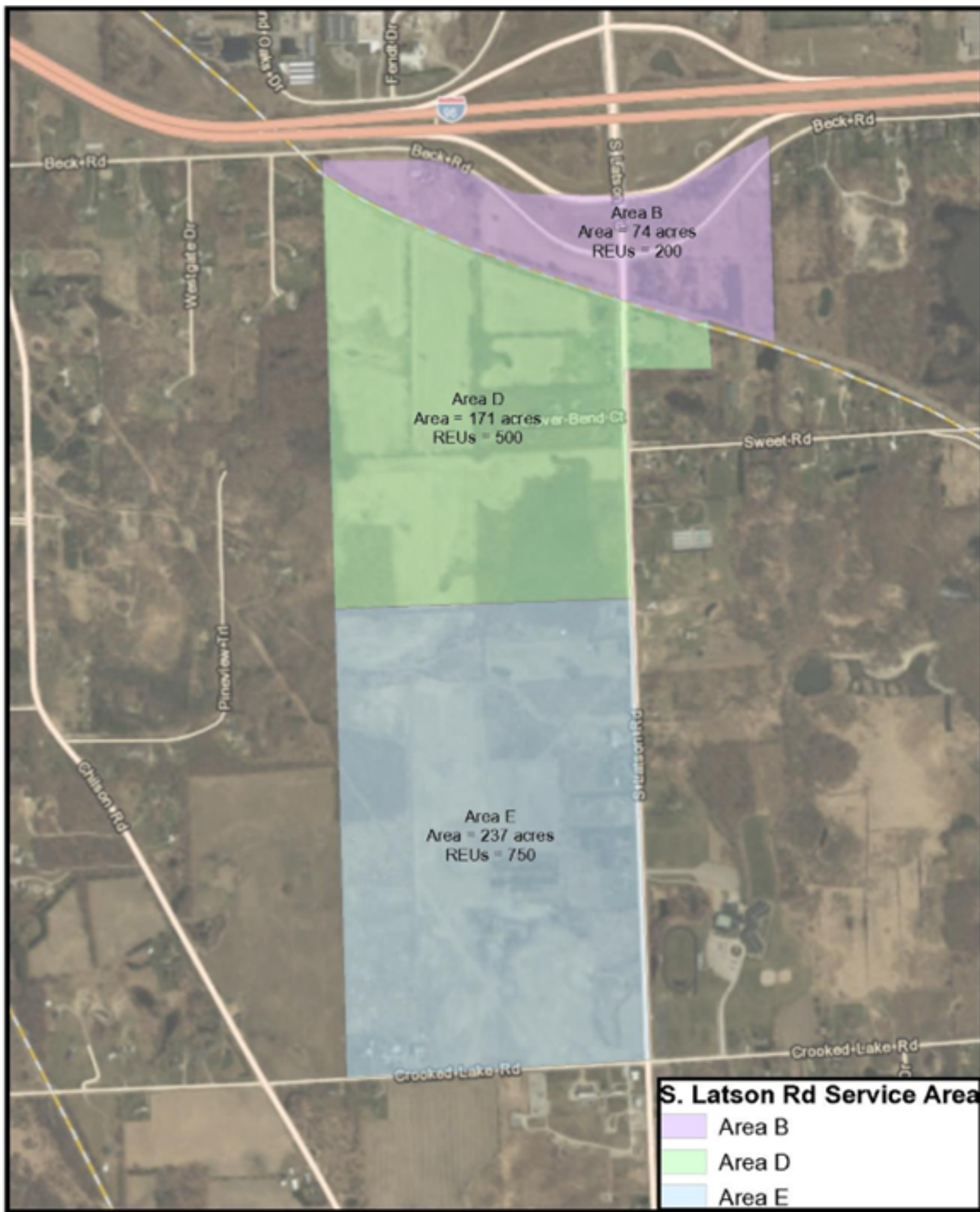


Figure 1
South Latson Rd Service Area

1 in = 1,300 ft



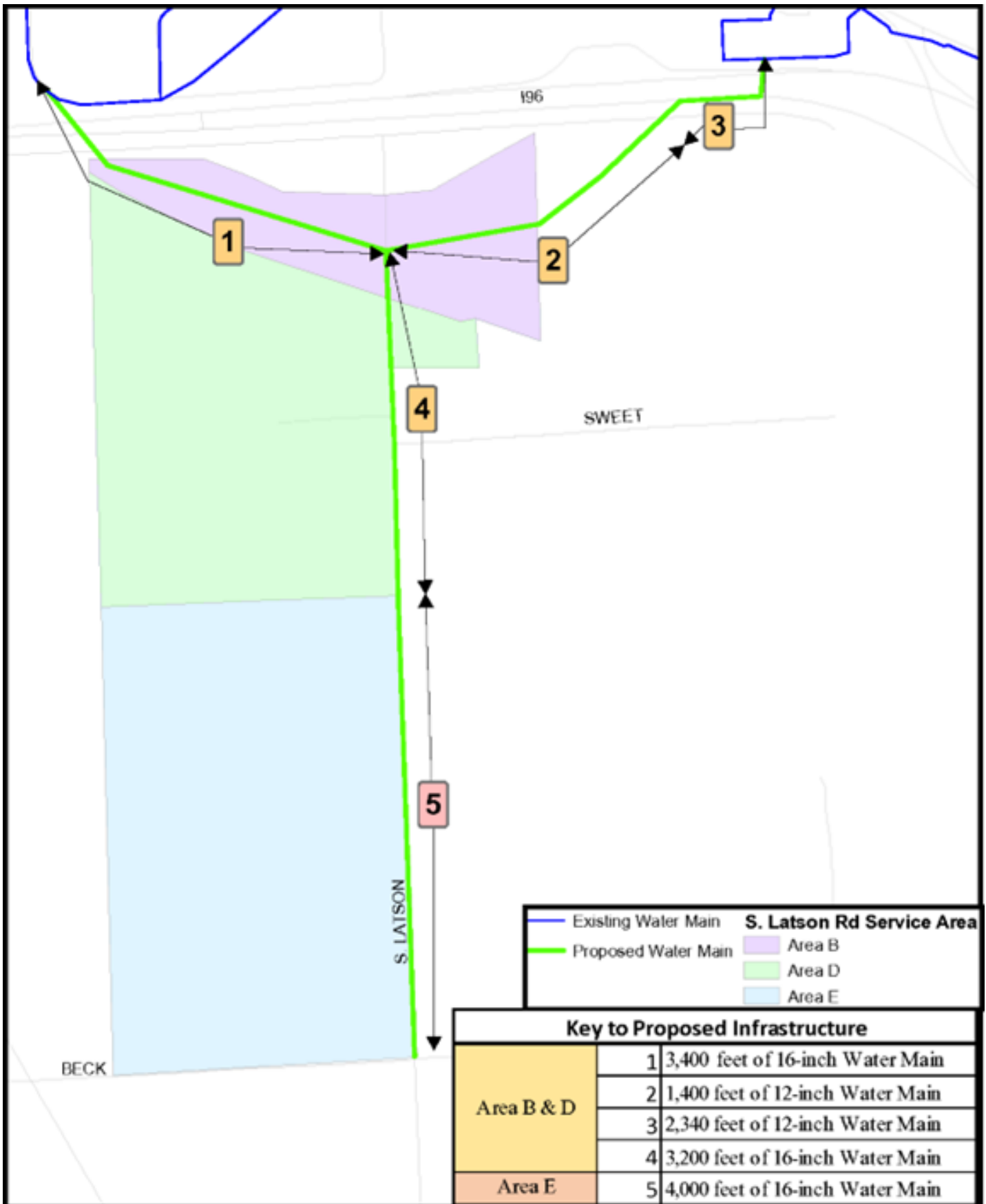


Figure 2
Water Distribution Infrastructure

1 inch = 1,300 feet



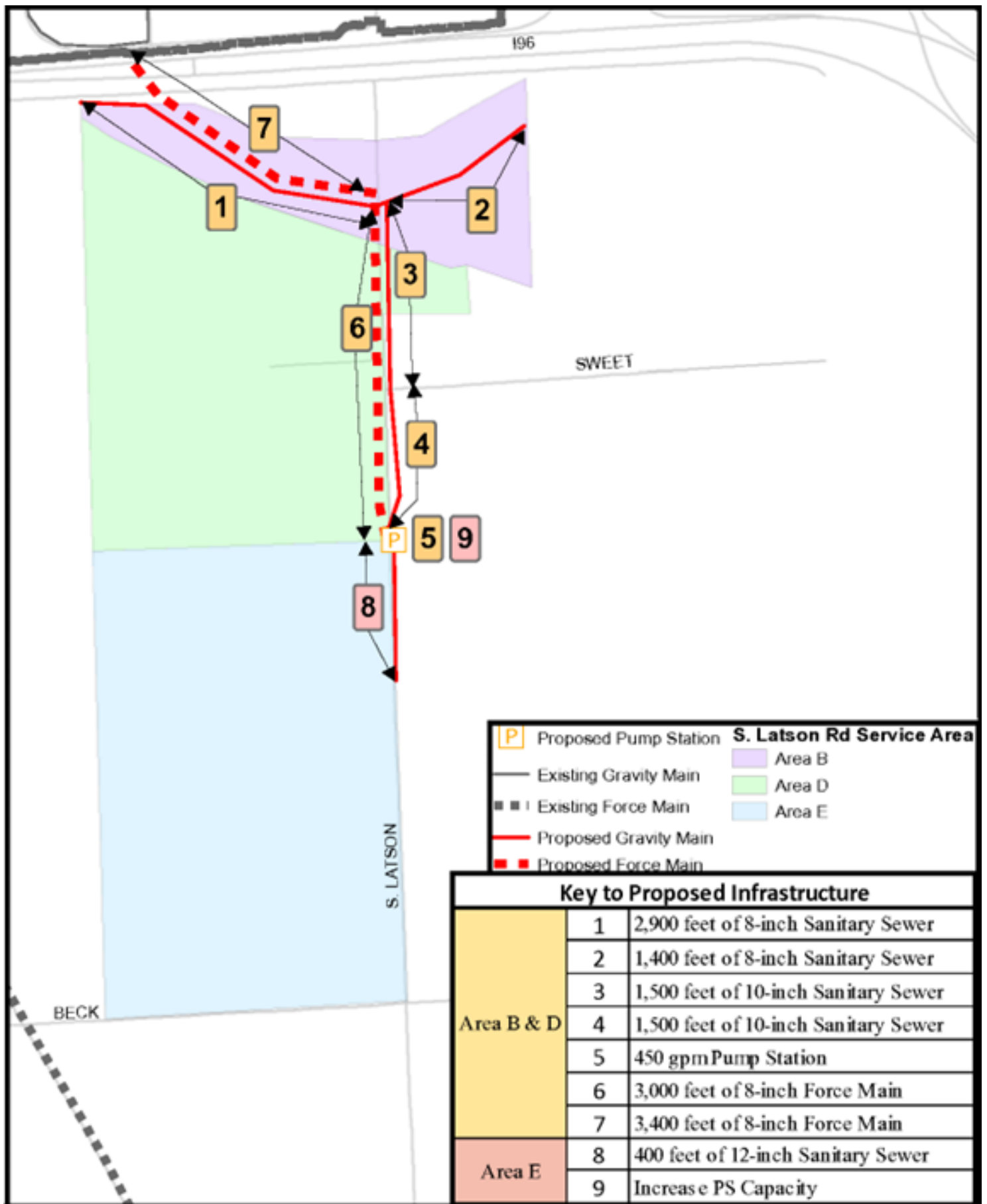


Figure 3
Sanitary Sewer Collection Infrastructure

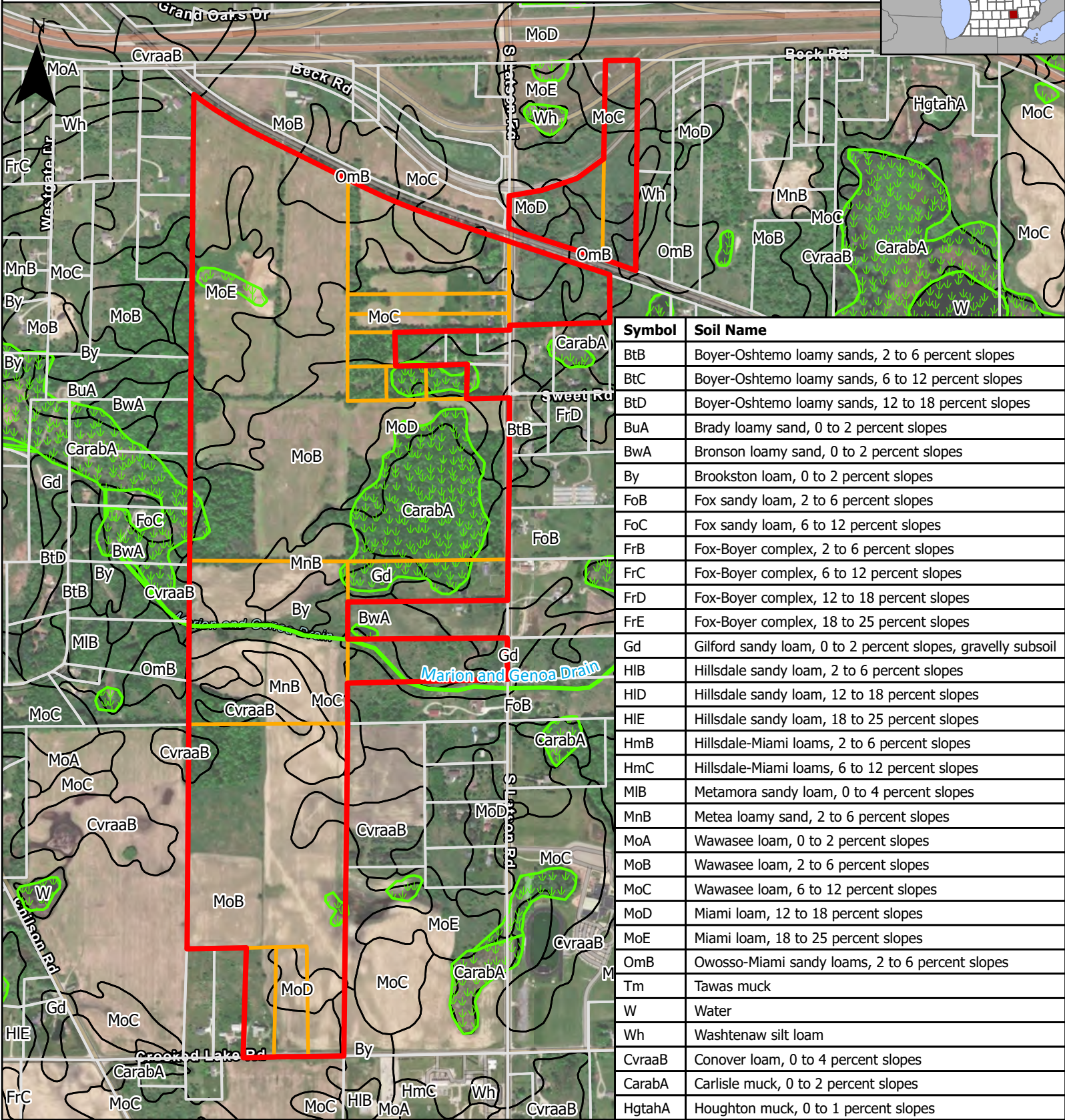
1 inch = 1,300 feet



Versa Development - Latson Road

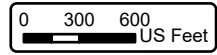
Site Map - Soils and Wetlands

Genoa Township, Livingston County, Michigan



Symbol	Soil Name
BtB	Boyer-Oshtemo loamy sands, 2 to 6 percent slopes
BtC	Boyer-Oshtemo loamy sands, 6 to 12 percent slopes
BtD	Boyer-Oshtemo loamy sands, 12 to 18 percent slopes
BuA	Brady loamy sand, 0 to 2 percent slopes
BwA	Bronson loamy sand, 0 to 2 percent slopes
By	Brookston loam, 0 to 2 percent slopes
FoB	Fox sandy loam, 2 to 6 percent slopes
FoC	Fox sandy loam, 6 to 12 percent slopes
FrB	Fox-Boyer complex, 2 to 6 percent slopes
FrC	Fox-Boyer complex, 6 to 12 percent slopes
FrD	Fox-Boyer complex, 12 to 18 percent slopes
FrE	Fox-Boyer complex, 18 to 25 percent slopes
Gd	Gilford sandy loam, 0 to 2 percent slopes, gravelly subsoil
HIB	Hillsdale sandy loam, 2 to 6 percent slopes
HID	Hillsdale sandy loam, 12 to 18 percent slopes
HIE	Hillsdale sandy loam, 18 to 25 percent slopes
HmB	Hillsdale-Miami loams, 2 to 6 percent slopes
HmC	Hillsdale-Miami loams, 6 to 12 percent slopes
MIB	Metamora sandy loam, 0 to 4 percent slopes
MnB	Metea loamy sand, 2 to 6 percent slopes
MoA	Wawasee loam, 0 to 2 percent slopes
MoB	Wawasee loam, 2 to 6 percent slopes
MoC	Wawasee loam, 6 to 12 percent slopes
MoD	Miami loam, 12 to 18 percent slopes
MoE	Miami loam, 18 to 25 percent slopes
OmB	Owosso-Miami sandy loams, 2 to 6 percent slopes
Tm	Tawas muck
W	Water
Wh	Washtenaw silt loam
CvraaB	Conover loam, 0 to 4 percent slopes
CarabA	Carlisle muck, 0 to 2 percent slopes
HgtahA	Houghton muck, 0 to 1 percent slopes

 Area of Interest Soil Types
 Latson Partners LLC Owned Parcel NWI Wetlands
 Parcel Boundary



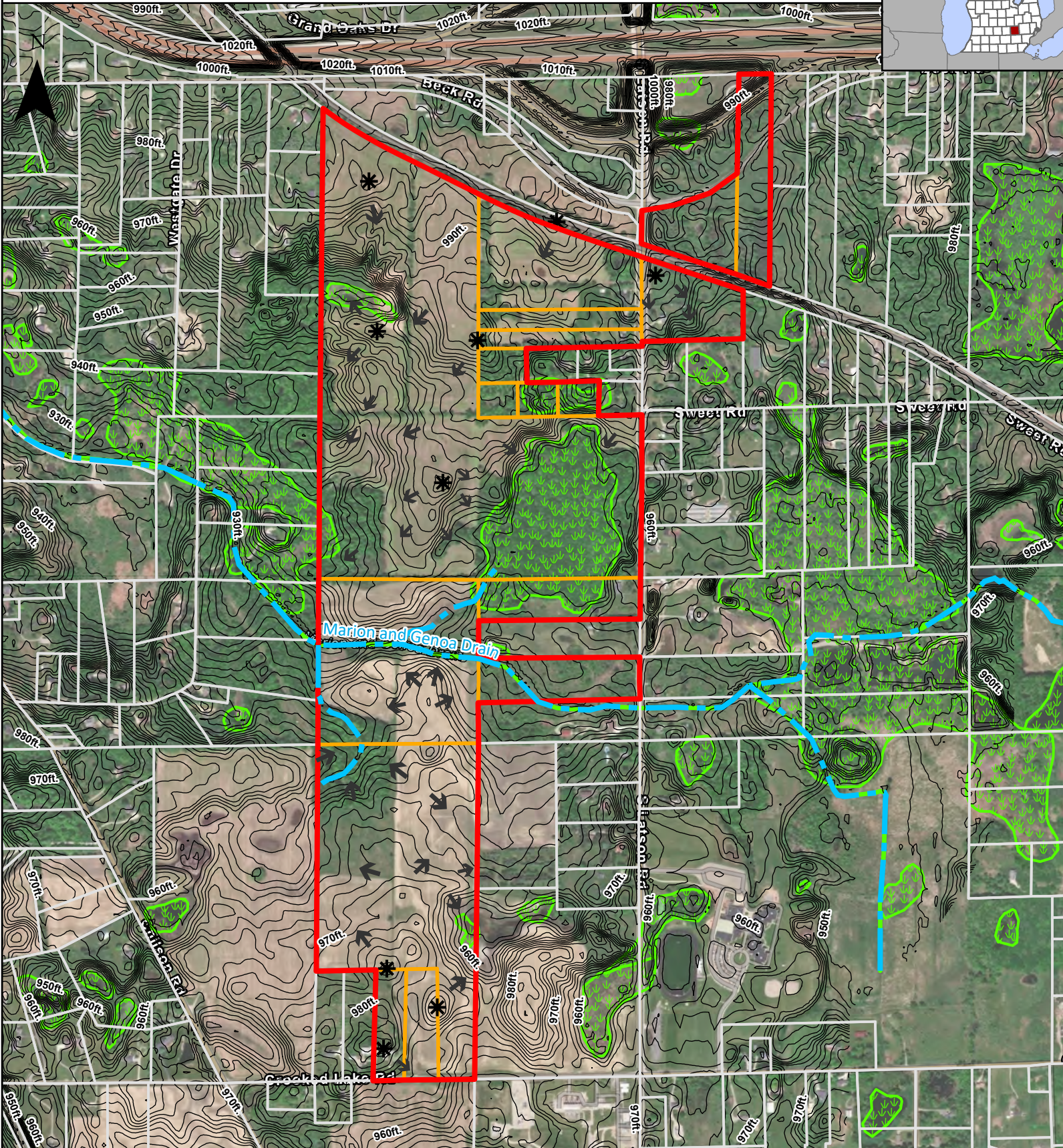
ATWELL

The information contained on this map is proprietary and confidential. The use or disclosure of this information by you to third parties is prohibited by law and may give rise to civil or criminal liability.

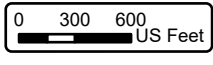
Versa Development - Latson Road

Topography & Natural Features

Genoa Township, Livingston County, Michigan



- * Local High Point
- Area of Interest
- Latson Partners LLC Owned Parcel
- Parcel Boundary
- NWI Wetlands
- Estimated Flow Direction
- 2 Ft Contour
- Watercourse_NHD



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MEMO

VIA EMAIL todd@versacos.com

To: Todd Wyett
Latson South, LLC

From: Jacob Swanson, PE
Fleis & VandenBrink

Date: May 31, 2023

Re: Latson Farm PUD
Genoa Township, Michigan
Traffic Impact Study

1 INTRODUCTION

This report presents the results of a Traffic Impact Study (TIS) for the proposed Latson Farm Planned Unit Development (PUD) in Genoa Township, Michigan. The project site is located on undeveloped property generally in the southwest quadrant of the Latson Road & Beck Road intersection, as shown on the attached **Figure 1**. The proposed project includes the construction of approximately 212-Acres of property for a mixed-use PUD project. At this time, the land uses are still unknown and would potentially include various land uses, such as: warehousing, industrial, research & development, commercial, office, multi-family housing, senior housing, and single-family homes. Site access is currently proposed via three (3) full access driveways to Latson Road, one (1) full access driveway to Crooked Lake Road, and 1-2 full access driveways to Beck Road.

The scope of this study was developed based on Fleis & VandenBrink's (F&V) knowledge of the study area, understanding of the development program, accepted traffic engineering practice and information published by the Institute of Transportation Engineers (ITE). In addition, the Livingston County Road Commission (LCRC) and Genoa Township also provided input regarding the scope of work for this study. The study analyses were completed using Synchro/SimTraffic (Version 11). Sources of data for this study include F&V subconsultant Quality Counts, LLC (QC), LCRC, ITE, MDOT, and information provided by the client. All background information is attached for reference.

2 BACKGROUND

2.1 EXISTING ROAD NETWORK

Vehicle transportation for the proposed development is provided via Latson Road; with regional transportation being provided via I-96, located just north of the project site. The lane use and traffic control at the study intersections are shown on the attached **Figure 2** and the study roadways are further described below. For the purposes of this study, all minor streets and driveways are assumed to have an operating speed of 25 miles per hour (mph), unless otherwise noted.

I-96 runs in the east and west directions, approximately ½-mile north of the project site. I-96 has an Average Annual Daily Traffic (AADT) volume of approximately 56,000 vehicles per day (SEMCOG 2018) and is under the jurisdiction of MDOT. The study section of roadway has a posted speed limit of 70 mph; however, for analysis purposes, the speed limit for the exit/entrance ramps was assumed to be 25 mph. The roadway is a median divided interstate and has a typical six-lane cross-section, with three (3) lanes in each direction. At the intersection of Latson Road & EB I-96 exit-ramp, the ramp approach provides dual (2) left-turn lanes and a single right-turn lane. At the intersection of Latson Road & WB I-96 exit-ramp, the ramp approach provides a single left-turn lane and dual (2) right-turn lanes.

Grand River Avenue (I-96 BL) generally runs in the northwest and southeast directions, approximately 1-mile north of the project site. Grand River Avenue is under the jurisdiction of MDOT and has a posted speed limit of 50 mph. The study section of Grand River has a national functional classification of *Principal Arterial* and has an AADT volume of approximately 30,500 vehicles per day (SEMCOG 2021). The roadway has a typical five-lane cross-section, with two lanes in each direction and a center two-way left-turn lane (TWLTL). Additionally, Grand River widens at the intersection with Latson Road to provide dual (2) left-turn lanes and exclusive right-turn lanes in both directions.

Latson Road runs in the north and south directions, adjacent to the project site. The study section of Latson Road has an unposted speed limit of 55 mph and is under the jurisdiction of LCRC. Latson Road has a national functional classification of *Minor Arterial* and an AADT volume of approximately 9,400 vehicles per day (SEMCOG 2018) south of I-96. The study section north of Cloverbend Road has a typical five-lane cross-section, with two (2) lanes in each direction and a center TWLTL. South of Cloverbend Road, the roadway narrows to provide a typical two-lane cross-section, with one (1) lane in each direction, widening at the Crooked Lake Road intersection to provide exclusive left-turn lanes in both directions.

Beck Road runs in the east and west directions, adjacent to the north side of the project limits, east of Latson Road. Beck Road is under the jurisdiction of LCRC and has an unposted speed limit of 55 mph. The national functional classification of Beck Road through the study area is *Local Road*. The roadway is paved for approximately 500-ft both east and west of Latson Road; however, beyond the paved area Beck Road is a gravel road. Exclusive left-turn lanes are provided on both intersection approaches to Latson Road.

Sweet Road runs in the east and west directions on the east side of Latson Road, opposite the proposed development. Sweet Road is under the jurisdiction of LCRC and has an unposted speed limit of 55 mph. The national functional classification of Beck Road through the study area is *Local Road*. The roadway is paved for approximately 100-ft east of Latson Road; however, beyond this area Sweet Road is a gravel road.

Crooked Lake Road runs in the east and west directions, south of the proposed development. Crooked Lake Road has an AADT volume of approximately 2,400 vehicles per day (SEMCOG 2019). Crooked Lake Road is under the jurisdiction of LCRC and has an unposted speed limit of 55 mph. The national functional classification of Crooked Lake Road through the study area is *Local Road*. The roadway is paved for approximately 200-ft both east and west of Latson Road; however, beyond the paved area Crooked Lake Road is a gravel road. Exclusive left-turn lanes are provided on both intersection approaches to Latson Road.

Chilson Road generally runs in the northwest and southeast directions, southwest of the proposed development. Chilson Road is under the jurisdiction of LCRC and has a posted speed limit of 55 mph. The study section of Chilson Road is a typical two-lane cross-section, with one (1) lane in each direction. Chilson Road has an AADT volume of approximately 2,800 vehicles per day (SEMCOG 2021) and a national functional classification of Chilson Road through the study area is *Minor Arterial*.

2.2 EXISTING TRAFFIC VOLUMES

F&V subconsultant QC collected existing Turning Movement Count (TMC) data on Tuesday May 2, 2023, during the AM (7:00 AM-9:00 AM) and PM (3:00 PM-6:00 PM) peak periods at the following study intersections:

- Latson Road & Grand River Avenue
- Latson Road & EB I-96 Ramps
- Latson Road & Sweet Road
- Crooked Lake Road & Chilson Road
- Latson Road & WB I-96 Ramps
- Latson Road & Beck Road
- Latson Road & Crooked Lake Road

The *Three Fires Elementary School* has an 8:40AM start time and a 3:40PM end time. Therefore, intersection turning movement counts were collected at the study intersections during these time periods, in order to include the potential peaking characteristics of the school.

During collection of the turning movement counts, Peak Hour Factors (PHFs), pedestrian and bike volumes, and commercial truck percentages were recorded and used in the traffic analysis. Through volumes were carried through the roadway network and balanced at the proposed site driveway locations. At locations where access is provided between study intersections, “dummy” intersections were used to account for sink and source volumes, and through volumes were carried along the main study roadways. Therefore, the traffic

volumes used in the analysis and shown on the attached traffic volume figures may not match the raw traffic volumes shown in the data collection. The weekday AM and PM peak hours for the adjacent roadway network were observed to generally occur between 8:00 AM to 9:00 AM and 4:30 PM to 5:30 PM, respectively. F&V collected an inventory of existing lane use and traffic controls, as shown on the attached **Figure 2**. Additionally, F&V obtained the current traffic signal timing information from MDOT and LCRC. The existing 2023 peak hour traffic volumes used in the analysis are shown on the attached **Figure 3**. All applicable background data referenced in this memorandum is attached.

3 EXISTING CONDITIONS (2023)

Existing peak hour vehicle delays and Levels of Service (LOS) were calculated at the study intersection using Synchro/SimTraffic (Version 11) traffic analysis software. This analysis was based on the existing lane use and traffic control shown on the attached **Figure 2**, the existing peak hour traffic volumes shown on the attached **Figure 3**, and the methodologies presented in the *Highway Capacity Manual, 6th Edition* (HCM6).

Descriptions of LOS “A” through “F” as defined in the HCM6, are attached. Typically, LOS D is considered acceptable, with LOS A representing minimal delay and LOS F indicating failing conditions. The existing conditions results are attached and summarized in **Table 1**.

The results of the existing conditions analysis indicates that all approaches and movements at the study intersections are currently operating acceptably, at LOS D or better during both the AM and PM peak periods, with the exception of the following. Review of the SimTraffic network simulations at all of the remaining study intersections indicates acceptable traffic operations throughout the study roadway network during both the AM and PM peak hours.

Latson Road & Grand River Avenue

- During the AM peak hour: The northbound right-turn movement and the westbound left-turn movement are currently operating at LOS F and LOS E, respectively.
- During the PM peak hour: The westbound right-turn movement is currently operating at LOS F. Additionally, the westbound and the southbound left-turn movements are currently operating at LOS E.

Review of SimTraffic network simulations indicates long vehicle queues for many of the study intersection approaches and movements. These queues were observed to generally take multiple cycle lengths in order to be serviced and were typically present throughout the peak hours.

Table 1: Existing Intersection Operations

Intersection	Control	Approach	Existing Conditions			
			AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1 Latson Road & Grand River Avenue	Signalized	EBL	44.1	D	45.0	D
		EBT	30.0	C	34.7	C
		EBR	22.0	C	24.7	C
		WBL	57.8	E	69.2	E
		WBT	26.9	C	34.6	C
		WBR	14.1	B	98.6	F
		NBL	45.2	D	53.1	D
		NBT	38.7	D	40.4	D
		NBR	80.9	F	28.0	C
		SBL	41.8	D	78.9	E
		SBT	30.4	C	38.4	D
		SBR	25.9	C	25.5	C
Overall			38.6	D	51.2	D

	Intersection	Control	Approach	Existing Conditions			
				AM Peak		PM Peak	
				Delay (s/veh)	LOS	Delay (s/veh)	LOS
2	Latson Road & WB I-96 Ramps	Signalized	WBL	33.1	C	26.8	C
			WBR	38.2	D	33.8	C
			NBL	1.0	A	6.4	A
			NBT	0.2	A	0.4	A
			SBT	7.2	A	17.1	B
			SBR	7.9	A	20.0	B
			Overall	7.6	A	15.3	B
3	Latson Road & EB I-96 Ramps	Signalized	EBL	33.8	C	33.5	C
			EBR	29.5	C	30.4	C
			NBT	5.1	A	5.4	A
			NBR	4.8	A	4.7	A
			SBL	2.2	A	2.3	A
			SBT	0.1	A	0.2	A
			Overall	13.7	B	11.7	B
4	Latson Road & Beck Road	Stop (Minor)	EBL	11.5	B	13.4	B
			EBTR	0.0*	A	9.1	A
			WBL	0.0*	A	0.0*	A
			WBTR	9.4	A	9.8	A
			NBL	0.0*	A	0.0*	A
			SBL	8.3	A	8.3	A
5	Latson Road & Sweet Road	Stop (Minor)	WB	12.0	B	19.8	C
			NB	Free			
			SBL	8.2	A	8.4	A
6	Latson Road & Crooked Lake Road	Stop (All-Way)	EBL	10.0	A	11.6	B
			EBTR	9.4	A	10.9	B
			WBL	9.9	A	12.5	B
			WBTR	9.8	A	12.5	B
			NBL	8.7	A	9.7	A
			NBTR	14.8	B	26.3	D
			SBL	9.7	A	11.3	B
			SBTR	10.7	B	25.1	D
			Overall	12.3	B	21.3	C
7	Crooked Lake Road & Chilson Road	Stop (Minor)	EB	10.5	B	11.3	B
			WB	10.2	B	11.1	B
			NBL	7.4	A	7.6	A
			SBL	7.6	A	7.5	A

* Indicates no vehicle volume present

3.1 BACKGROUND GROWTH

Southeast Michigan Council of Governments (SEMCOG), the multi-jurisdictional agency responsible for the transportation planning in Southeast Michigan, maintains the regional transportation planning models and provides information regarding projected growth rates along roadways throughout their jurisdiction. The SEMCOG traffic volume forecast models were utilized to calculate background growth rates on the adjacent study sections of Latson Road for use in this analysis; indicating the following growth rates, compounded annually, from 2020 to 2050. This information was used to determine the applicable growth rate to project the existing 2023 traffic volumes to the build-out year of 2043. The growth rates for the study corridors provided by the SEMCOG forecast models are summarized in **Table 2**.



Table 2: SEMCOG Growth Rates

Road	Limits	Growth Rate
Latson Road	Chilson Road to Crooked Lake Road	0.72%
Latson Road	Crooked Lake Road to I-96	0.68%

Therefore, a conservative growth rate of 0.72% was utilized for the study roadway network, resulting in an approximately 15% growth rate on Latson Road over the 20-year buildout. It is expected that a high percentage of the growth on Latson Road will be generated by the proposed development. However, in order to provide a more conservative evaluation, the full growth rate was applied to the study intersections.

In addition to the background traffic growth, it is important to account for traffic that will be generated by developments within the vicinity of the study area that are currently under construction or will be within the buildout year. At the time of this study, the following background development was identified:

- St. Joseph Mercy Health Center Expansion

The site-generated trips were obtained for the background development from the Traffic Impact Study (TIS) completed; the TIS excerpts are attached for reference. The background development trips were added to the existing traffic volumes, after applying a conservative annual growth rate of **0.72%** to forecast the background 2043 traffic volumes *without the proposed development*, as shown on the attached **Figure 4**.

4 BACKGROUND CONDITIONS (2043 NO BUILD)

Background peak hour vehicle delays and LOS *without the proposed development* were calculated at the study intersections based on the existing lane use and traffic control shown on the attached **Figure 2**, the background peak hour traffic volumes shown on the attached **Figure 4**, and the methodologies presented in the HCM6. The results of the background conditions analysis are attached and summarized in **Table 2**.

Table 3: Background Intersection Operations

Intersection	Control	Approach	Existing Conditions				Background Conditions				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
1 Latson Road & Grand River Avenue	Signal	EBL	44.1	D	45.0	D	44.3	D	47.0	D	0.2	-	2.0	-
		EBT	30.0	C	34.7	C	35.9	D	41.6	D	5.9	C→D	6.9	C→D
		EBR	22.0	C	24.7	C	23.6	C	26.8	C	1.6	-	2.1	-
		WBL	57.8	E	69.2	E	90.6	F	127.0	F	32.8	E→F	57.8	E→F
		WBT	26.9	C	34.6	C	30.7	C	55.9	E	3.8	-	21.3	C→E
		WBR	14.1	B	98.6	F	14.7	B	210.0	F	0.6	-	111.4	-
		NBL	45.2	D	53.1	D	44.5	D	66.9	E	-0.7	-	13.8	D→E
		NBT	38.7	D	40.4	D	40.2	D	42.5	D	1.5	-	2.1	-
		NBR	80.9	F	28.0	C	163.9	F	29.3	C	83.0	-	1.3	-
		SBL	41.8	D	78.9	E	43.9	D	127.0	F	2.1	-	48.1	E→F
		SBT	30.4	C	38.4	D	30.2	C	39.7	D	-0.2	-	1.3	-
SBR	25.9	C	25.5	C	25.3	C	24.5	C	-0.6	-	-1.0	-		
		Overall	38.6	D	51.2	D	51.2	D	81.1	F	12.6	-	29.9	D→F
2 Latson Road & WB I-96 Ramps	Signal	WBL	33.1	C	26.8	C	32.2	C	25.3	C	-0.9	-	-1.5	-
		WBR	38.2	D	33.8	C	37.6	D	34.6	C	-0.6	-	0.8	-
		NBL	1.0	A	6.4	A	1.6	A	10.5	B	0.6	-	4.1	A→B
		NBT	0.2	A	0.4	A	0.3	A	0.6	A	0.1	-	0.2	-
		SBT	7.2	A	17.1	B	7.9	A	19.1	B	0.7	-	2.0	-
		SBR	7.9	A	20.0	B	9.0	A	23.7	C	1.1	-	3.7	B→C
				Overall	7.6	A	15.3	B	7.9	A	16.8	B	0.3	-



Intersection	Control	Approach	Existing Conditions				Background Conditions				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
3 Latson Road & EB I-96 Ramps	Signal	EBL	33.8	C	33.5	C	32.7	C	32.5	C	-1.1	-	-1.0	-
		EBR	29.5	C	30.4	C	27.5	C	28.9	C	-2.0	-	-1.5	-
		NBT	5.1	A	5.4	A	6.1	A	6.4	A	1.0	-	1.0	-
		NBR	4.8	A	4.7	A	5.7	A	5.4	A	0.9	-	0.7	-
		SBL	2.2	A	2.3	A	4.0	A	4.2	A	1.8	-	1.9	-
		SBT	0.1	A	0.2	A	0.1	A	0.3	A	0.0	-	0.1	-
		Overall	13.7	B	11.7	B	14.3	B	12.1	B	0.6	-	0.4	-
4 Latson Road & Beck Road	Stop (Minor)	EBL	11.5	B	13.4	B	12.6	B	14.7	B	1.1	-	1.3	-
		EBTR	0.0*	A	9.1	A	0.0*	A	9.3	B	0.0*	-	0.2	A→B
		WBL	0.0*	A	0.0*	A	0.0*	A	0.0*	A	0.0*	-	0.0*	-
		WBTR	9.4	A	9.8	A	9.7	A	10.1	B	0.3	-	0.3	A→B
		NBL	0.0*	A	0.0*	A	0.0*	A	0.0*	A	0.0*	-	0.0*	-
		SBL	8.3	A	8.3	A	8.5	A	8.6	A	0.2	-	0.3	-
5 Latson Road & Sweet Road	Stop (Minor)	WB	12.0	B	19.8	C	13.0	B	24.0	C	1.0	-	4.2	-
		NB	Free				Free				N/A			
		SBL	8.2	A	8.4	A	8.3	A	8.6	A	0.1	-	0.2	-
6 Latson Road & Crooked Lake Road	Stop (All-Way)	EBL	10.0	A	11.6	B	10.5	B	12.5	B	0.5	A→B	0.9	-
		EBTR	9.4	A	10.9	B	9.9	A	11.9	B	0.5	-	1.0	-
		WBL	9.9	A	12.5	B	10.4	B	13.9	B	0.5	A→B	1.4	-
		WBTR	9.8	A	12.5	B	10.6	B	14.6	B	0.8	A→B	2.1	-
		NBL	8.7	A	9.7	A	8.9	A	10.2	B	0.2	-	0.5	A→B
		NBTR	14.8	B	26.3	D	19.8	C	53.6	F	5.0	B→C	27.3	D→F
		SBL	9.7	A	11.3	B	10.2	B	12.6	B	0.5	A→B	1.3	-
		SBTR	10.7	B	25.1	D	11.9	B	50.1	F	1.2	-	25.0	D→F
Overall	12.3	B	21.3	C	15.2	C	39.5	E	2.9	B→C	18.2	C→E		
7 Crooked Lake Road & Chilson Road	Stop (Minor)	EB	10.5	B	11.3	B	10.8	B	11.9	B	0.3	-	0.6	-
		WB	10.2	B	11.1	B	10.5	B	11.7	B	0.3	-	0.6	-
		NBL	7.4	A	7.6	A	7.4	A	7.6	A	0.0	-	0.0	-
		SBL	7.6	A	7.5	A	7.6	A	7.6	A	0.0	-	0.1	-

*Indicates no vehicle volume present

The results of the background conditions analysis indicates that all approaches and movements at the study intersections are expected to continue operating in a manner similar to the existing conditions analysis, with the following exceptions:

Latson Road & Grand River Avenue

- During the AM peak hour: The westbound left-turn movement is expected to operate at LOS F.
- During the PM peak hour: The westbound and southbound left-turn movements are expected to operate at LOS F. Additionally, the westbound through movement and the northbound left-turn movement are expected to operate at LOS E.

Review of SimTraffic microsimulations indicates long vehicle queues for the majority of the study intersection approaches and movements, with further increased queue lengths compared to existing conditions. These queues were observed to take multiple cycle lengths in order to be serviced and were typically present throughout the peak hours.



Latson Road & Crooked Lake Road

- During the PM peak hour: The northbound shared through/right movement and southbound shared through/right movement are expected to operate at LOS F.

Review of SimTraffic network simulations indicates acceptable operations throughout the remaining study roadway network, similar to the existing conditions analysis, with moderate increases in vehicle queuing for all approaches and movements.

5 SITE TRIP GENERATION

The number of AM and PM peak hour vehicle trips that would be generated by the proposed development was forecast based on data published by ITE in the *Trip Generation Manual, 11th Edition* and the *ITE Trip Generation Handbook, 3rd Edition*. The proposed development includes Industrial/High-Tech facilities and residential units on the west side of Latson Road and gas station with commercial buildings on the east side of Latson Road. There are no specific plans yet determined for the site; therefore, several assumptions were made in the trip generation analysis regarding the conceptual site plan and projected land uses. The site trip generation forecast was reviewed and approved by LCRC prior to use in this analysis and is summarized in **Table 4**.

Table 4: Trip Generation Summary

Land Use	ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Industrial Park	130	1,500,000	SF	3,839	413	97	510	112	398	510
Single-Family Detached	210	60	DU	631	12	35	47	38	23	61
Multi-Family Housing (Low-Rise)	220	452	DU	2,973	39	124	163	135	80	215
Medical-Dental Office Building	720	18,000	SF	665	40	11	51	21	49	70
Shopping Plaza (40-150k SF) - <i>NE Parcel</i>	821	51,000	SF	3,444	55	33	88	130	135	265
<i>Pass-By</i>	40%			689	17	17	34	53	53	106
	New Trips			2,755	38	16	54	77	82	159
Strip Retail Plaza (<40k SF) - <i>East Parcel</i>	822	38,500	SF	1,854	55	36	91	102	101	203
<i>Pass-By</i>	40%			371	18	18	36	40	40	80
	New Trips			1,483	37	18	55	62	61	123
Coffee Shop with Drive-Through	937	1,500	SF	800	66	63	129	29	29	58
<i>Pass-By</i>	50% AM, 55% PM			420	33	33	66	16	16	32
	New Trips			380	33	30	63	13	13	26
Gas Station with Convenience Market	945	8	VFP	2,116	64	64	128	74	73	147
<i>Pass-By</i>	60% AM, 56% PM			1,227	38	38	76	41	41	82
	New Trips			889	26	26	52	33	32	65
	Total Trips			16,322	744	463	1,207	641	888	1,529
	Total Pass-By			2,707	106	106	212	150	150	300
	Total New Trips			13,615	638	357	995	491	738	1,229

As is typical of commercial developments, a portion of the trips generated are from vehicles that are already on the adjacent roadways and will pass the site on the way from an origin to their ultimate destination. Therefore, not all traffic at the site driveways is necessarily new traffic added to the street system. This percentage of the trips generated by the development are considered “pass-by” trips, which are already present within the adjacent street system. These trips are therefore reduced from the total external trips generated by a study site. The pass-by trips for this site were applied to Latson Road and were considered as either pass-by or diverted link, depending on the proposed site access location.

The percentage of pass-by trips used in this analysis was determined based on the rates published by ITE in the *Trip Generation Manual, 11th Edition*. However, ITE does not provide pass-by data for LUC 822: Strip Retail Plaza; therefore, the pass-by data for LUC 821: Shopping Plaza was utilized for this analysis. Additionally, ITE does not provide pass-by data for LUC 937: Coffee Shop with Drive-Through; therefore, the pass-by data for LUC 934: Fast-Food Restaurant with Drive-Through was utilized for this analysis.



6 SITE TRIP DISTRIBUTION

The vehicular trips that would be generated by the proposed development were assigned to the study roadway network based on the proposed site access plan and driveway configurations, the existing peak hour traffic patterns in the adjacent roadway network, and the methodologies published by ITE. The ITE trip distribution methodology assumes that new trips are home-to-work based, entering the network to access the development, then leave the development to return to their direction of origin, whereas pass-by trips will enter and exit the development, then continue in their original direction of travel. The site trip distributions utilized in this analysis are summarized in **Table 5**.

Table 5: New Site Trip Distribution

To/From	Via	Commercial		Commercial Pass-By		Residential		Industrial	
		AM	PM	AM	PM	AM	PM	AM	PM
North	Latson Road	12%	7%	59% (NB)	45% (NB)	5%	7%	12%	13%
South	Latson Road	4%	4%	41% (SB)	55% (SB)	3%	4%	4%	4%
East	Grand River Avenue	8%	17%			15%	17%	8%	11%
	I-96	26%	33%			41%	33%	26%	27%
	Crooked Lake Road	1%	2%			2%	2%	1%	2%
West	Grand River Avenue	8%	10%			8%	10%	8%	10%
	I-96	41%	27%			26%	27%	41%	33%
Total		100%	100%			100%	100%	100%	100%

The vehicular traffic volumes shown in **Table 4** were distributed to the study network according to the distribution shown in **Table 5**. The site-generated trips shown on the attached **Figure 5** were added to the background peak hour traffic volumes shown on the attached **Figure 4**, in order to calculate the future peak hour traffic volumes with the addition of the proposed development. Future peak hour traffic volumes are shown on the attached **Figure 6**.

7 FUTURE CONDITIONS (2024 BUILDOUT)

Future peak hour vehicle delays and LOS *with the proposed development* were calculated based on the future lane use and traffic control shown on the attached **Figure 2**, the proposed site access plan, the future traffic volumes shown on the attached **Figure 6**, and the methodologies presented in the HCM6. The results of the future conditions analysis are attached and summarized in **Table 6**.

Table 6: Future Intersection Operations

Intersection	Control	Approach	Background Conditions				Future Conditions				Difference				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	
1	Latson Road & Grand River Avenue	Signal	EBL	44.3	D	47.0	D	44.3	D	47.0	D	0.0	-	0.0	-
			EBT	35.9	D	41.6	D	35.9	D	42.6	D	0.0	-	1.0	-
			EBR	23.6	C	26.8	C	24.5	C	29.6	C	0.9	-	2.8	-
			WBL	90.6	F	127.0	F	181.1	F	195.7	F	90.5	-	68.7	-
			WBT	30.7	C	55.9	E	30.7	C	58.6	E	0.0	-	2.7	-
			WBR	14.7	B	210.0	F	14.7	B	215.3	F	0.0	-	5.3	-
			NBL	44.5	D	66.9	E	43.8	D	130.1	F	-0.7	-	63.2	E→F
			NBT	40.2	D	42.5	D	42.1	D	49.7	D	1.9	-	7.2	-
			NBR	163.9	F	29.3	C	221.0	F	37.5	C	57.1	-	8.2	-
			SBL	43.9	D	127.0	F	43.9	D	127.0	F	0.0	-	0.0	-
			SBT	30.2	C	39.7	D	33.1	C	41.6	D	2.9	-	1.9	-
			SBR	25.3	C	24.5	C	26.3	C	24.2	C	1.0	-	-0.3	-
Overall			51.2	D	81.1	F	65.2	E	93.1	F	14.0	D→E	12.0	-	

Intersection	Control	Approach	Background Conditions				Future Conditions				Difference				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	
2	Latson Road & WB I-96 Ramps	Signal	WBL	32.2	C	25.3	C	36.9	D	29.4	C	4.7	C→D	4.1	-
			WBR	37.6	D	34.6	C	31.4	D	33.6	C	-6.2	-	-1.0	-
			NBL	1.6	A	10.5	B	18.7	B	367.4	F	17.1	A→B	356.9	B→F
			NBT	0.3	A	0.6	A	0.5	A	1.0	A	0.2	-	0.4	-
			SBT	7.9	A	19.1	B	16.5	B	20.8	C	8.6	A→B	1.7	B→C
			SBR	9.0	A	23.7	C	16.4	B	23.4	C	7.4	A→B	-0.3	-
			Overall	7.9	A	16.8	B	13.7	B	50.1	D	5.8	A→B	33.3	B→D
3	Latson Road & EB I-96 Ramps	Signal	EBL	32.7	C	32.5	C	25.5	C	29.1	C	-7.2	-	-3.4	-
			EBR	27.5	C	28.9	C	42.1	D	36.1	D	14.6	C→D	7.2	C→D
			NBT	6.1	A	6.4	A	9.8	A	9.5	A	3.7	-	3.1	-
			NBR	5.7	A	5.4	A	9.5	A	8.3	A	3.8	-	2.9	-
			SBL	4.0	A	4.2	A	29.7	C	105.9	F	25.7	A→C	101.7	A→F
			SBT	0.1	A	0.3	A	0.5	A	0.6	A	0.4	-	0.3	-
			Overall	14.3	B	12.1	B	17.4	B	20.9	C	3.1	-	8.8	B→C
4	Latson Road & Beck Road	Stop (Minor)	EBL	12.6	B	14.7	B	64.4	F	588.4	F	51.8	B→F	573.7	B→F
			EBTR	0.0*	A	9.3	B	0.0*	A	10.0	B	0.0*	-	0.7	-
			WBL	0.0*	A	0.0*	A	42.3	E	811.3	F	0.0*	A→E	811.3	A→F
			WBTR	9.7	A	10.1	B	13.5	B	21.3	C	3.8	A→B	11.2	B→C
			NBL	0.0*	A	0.0*	A	0.0*	A	0.0*	A	0.0*	-	0.0*	-
			SBL	8.5	A	8.6	A	10.5	B	13.9	B	2.0	A→B	5.3	A→B
5	Latson Road & Sweet Road / Site Drive #2	Stop (Minor)	EB	N/A				29.5	D	414.1	F	N/A			
			WB	15.6	C	15.4	C	17.9	C	43.1	E	2.3	-	27.7	C→E
			NBL	Free				8.6	A	9.8	A	N/A			
			SBL	9.0	A	8.7	A	8.9	A	9.2	A	-0.1	-	0.5	-
6	Latson Road & Crooked Lake Road	Stop (All-Way)	EBL	10.5	B	12.5	B	10.7	B	12.8	B	0.2	-	0.3	-
			EBTR	9.9	A	11.9	B	10.2	B	12.2	B	0.3	A→B	0.3	-
			WBL	10.4	B	13.9	B	10.6	B	14.2	B	0.2	-	0.3	-
			WBTR	10.6	B	14.6	B	11.1	B	15.4	C	0.5	-	0.8	B→C
			NBL	8.9	A	10.2	B	9.0	A	10.5	B	0.1	-	0.3	-
			NBTR	19.8	C	53.6	F	23.7	C	64.1	F	3.9	-	10.5	-
			SBL	10.2	B	12.6	B	10.5	B	13.3	B	0.3	-	0.7	-
			SBTR	11.9	B	50.1	F	12.5	B	70.7	F	0.6	-	20.6	-
Overall	15.2	C	39.5	E	17.2	C	49.9	E	2.0	-	10.4	-			
7	Crooked Lake Road & Chilson Road	Stop (Minor)	EB	10.8	B	11.9	B	10.8	B	11.9	B	0.0	-	0.0	-
			WB	10.5	B	11.7	B	10.5	B	11.7	B	0.0	-	0.0	-
			NBL	7.4	A	7.6	A	7.4	A	7.6	A	0.0	-	0.0	-
			SBL	7.6	A	7.6	A	7.6	A	7.6	A	0.0	-	0.0	-
8	Latson Road & Site Drive #1	Stop (Minor)	EB	N/A				33.5	D	624.7	F	N/A			
			WB					13.3	B	20.9	C				
			NBL					8.7	A	8.4	A				
			SBL					9.6	A	10.2	B				
9	Latson Road & Site Drive #3	Stop (Minor)	EB	N/A				27.5	D	106.1	F	N/A			
			NBL					8.2	A	9.7	A				
			SB					Free							

Intersection	Control	Approach	Background Conditions				Future Conditions				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
10 Latson Road & Site Drive #4	Stop (Minor)	EBL	N/A				0.0*	A	0.0*	A	N/A			
		WB					Free							
		SB					8.8	A	9.0	A				

* Indicates no vehicle volume present

The results of the future conditions analysis indicate that all study intersection approaches and movements will continue to operate in a manner similar to background conditions, with the following exceptions:

Latson Road & Grand River Avenue

- During the PM peak hour: The northbound left-turn movement is expected to operate at LOS F.

The trips generated by the proposed development that will travel through this intersection are expected to account for less than 5% of the total entering intersection traffic volume. Therefore, any impact from the proposed development at this intersection is expected to be negligible as compared to daily fluctuations in traffic volumes and any changes will be unperceivable to the roadway users.

Latson Road & WB I-96 Ramp

- During the PM peak hour: The northbound left-turn movement is expected to operate at LOS F.

Review of SimTraffic network simulations indicates that long vehicle queues were observed in the northbound left-turn lane. These queues are the result of a large volume (~330 vehicles) of traffic making a northbound left turn and insufficient gaps within the southbound through traffic to allow for the existing permissive left-turn movement. These queues were present throughout the peak hour and were observed to exceed the available left-turn storage area, with vehicle queues extending through the study roadway network and blocking other study intersections; therefore, the SimTraffic queueing summary may present misleading projections.

Latson Road & EB I-96 Ramp

- During the PM peak hour: The southbound left-turn movement is expected to operate at LOS F.

Review of SimTraffic microsimulations indicates that long vehicle queues were observed in the southbound left-turn lane. These queues are the result of a large volume (~280 vehicles) of traffic making a southbound left turn and insufficient gaps within the northbound through traffic to allow for the existing permissive left-turn movement. These queues were present throughout the peak hour and were observed to exceed the available left-turn storage area, with vehicle queues extending through the study roadway network and blocking other study intersections; therefore, the SimTraffic queueing summary may present misleading projections.

Latson Road & Beck Road

- During the AM peak hour: The eastbound left-turn movement is expected to operate at LOS F and the westbound left-turn movements is expected to operate at LOS E.
- During the PM peak hour: The eastbound and westbound left-turn movements are expected to operate at LOS F.

Review of SimTraffic network simulations indicates generally acceptable operations during the AM peak hour; however, long vehicle queues were observed during the PM peak hour and were present throughout the peak period. These vehicle queues are the result of insufficient gaps within the through traffic along Latson Road, in addition to conflicting ingress and egress left-turn movements.

Latson Road & Sweet Road / Site Drive #2

- During the PM peak hour: The eastbound approach is expected to operate at LOS F and the westbound approach is expected to operate at LOS E.



The long vehicle queues at the other study intersections were observed to extend throughout the network and cause back-ups and blocked traffic along Latson Road; therefore, the attached SimTraffic summary report may present misleading queueing projections.

Latson Road & Site Drive #1

- During the PM peak hour: The eastbound approach is expected to operate at LOS F.

Review of SimTraffic network simulations indicates generally acceptable operations during the AM peak hour; however, long vehicle queues were observed during the PM peak hour and were present throughout the peak period. These vehicle queues are the result of insufficient gaps within the through traffic along Latson Road, in addition to conflicting ingress and egress left-turn movements.

Latson Road & Site Drive #3

- During the PM peak hour: The eastbound approach is expected to operate at LOS F.

The long vehicle queues at the other study intersections were observed to extend throughout the network and cause back-ups and blocked traffic along Latson Road; therefore, the attached SimTraffic summary report may present misleading queueing projections.

8 ACCESS MANAGEMENT

8.1 LATSON ROAD GEOMETRY

The roadway geometry for Latson Road adjacent to the site was reviewed for safety and operations. The geometry options include the following:

- **Five Lanes:** Four Lanes + center left-turn lane.
- **Narrow Median:** Direct Left-turns at intersections.
- **Wide Median:** Indirect Left-turns.

Key findings of this analysis include:

- The projected traffic volumes associated with this development does not require a wide boulevard section and median U-turns to accommodate the traffic operations.
- A narrow median would have the same operations at the site driveway intersections; however, residential driveways and other parcels along the corridor will be impacted by a median. Bi-directional median openings are not recommended.
- A wide boulevard section would require indirect left-turns. The railroad tracks are too close to the north site driveway to accommodate a median U-turn.
- A center left-turn lane will work well through this section of Latson Road. A center left-turn lane can be a potential concern if there is a high density of commercial driveways along the corridor. If future development is proposed to the east of the site, further evaluation of Latson Road should be considered at that time.
- Maintenance and snow removal of a median section on the corridor is more difficult and costly as compared to a five-lane roadway.

8.2 SITE DRIVE #2 / SWEET ROAD

The proposed Site Drive #2 is offset from the existing Sweet Road intersection. The operations and safety of this was reviewed and in general, it is preferable to align the existing and proposed access points; however, due to site limitations, alignment is not feasible. Therefore, the operations and safety of the offset was considered. Key findings of this review are summarized below:

- The volume of traffic on Sweet Road is relatively low.
- The ingress left-turn volumes are *not* conflicting.
- The egress left-turn volumes will have conflicting movements; however, the volume of egress left-turns on Sweet Road is very low. Therefore, the chances of this conflict occurring are minimal.

Overall, the proposed intersection and the offset with Sweet Road is expected to operate acceptably. As the development progresses, additional improvements at this intersection may be considered to mitigate operational delay and the intersection offset, including: signalization or a roundabout.

8.3 AUXILIARY TURN LANE EVALUATION

The proposed site driveways were evaluated for left- and right-turn treatments, based on the future traffic volumes shown on the attached **Figure 6**. LCRC does not maintain a warrant for right-turn lanes or tapers; therefore, the MDOT warrant was utilized for this analysis. The results of the auxiliary turn lane analysis are summarized in **Table 7** and the LCRC/MDOT warranting charts are attached.

Table 7. Desirable Driveway Spacing Summary

Site Driveway Intersection	Right-Turn Treatment	Left-Turn Treatment
NB Latson Road & Site Drive #1	No Treatment	N/A
SB Latson Road & Site Drive #1	Right-Turn Lane	N/A
Latson Road & Site Drive #2	Right-Turn Lane	No Treatment
Latson Road & Site Drive #3	Right-Turn Lane	No Treatment
Crooked Lake Road & Site Drive #4	No Treatment	No Treatment

The deceleration turn lanes and tapers should be constructed in accordance with LCRC standards and specifications.

9 FUTURE IMPROVEMENTS

In order to improve traffic operations to a LOS D or better for all intersection approaches and movements under future conditions, mitigation measures were investigated. These mitigation measures included signal timing adjustments, geometric improvements, and traffic control modifications. The proposed improvements and their impact to intersection operations are summarized below.

Several of the mitigation measures recommended for the signalized intersections throughout the network included an increase in cycle length and optimization of the offsets. Therefore, the entire network (excluding Grand River Avenue) was evaluated to determine the optimum cycle length and corresponding offsets. The resulting analysis indicated a 90-second cycle length and updated offsets would provide the best operations for the network as a whole; therefore, this mitigation measure was applied to all signalized intersections (excluding Grand River Avenue).

Latson Road & Grand River Avenue

Geometric improvements were investigated at the Latson Road & Grand River Avenue intersection. However, each of the four (4) approaches at this intersection already has dual left-turn lanes and dedicated right turn lanes. Additionally, there is not sufficient right-of-way to implement additional construction-related capacity-improvement mitigation measures. The existing operational deficiencies at this intersection require a regional analysis of the Grand River Avenue, which is outside the scope of this study. MDOT should consider improvements along the Grand River Avenue corridor in order to increase capacity and provide better operations for this regional route.

However, without a regional analysis, the following improvements should be considered to aid in mitigating existing delays during both the AM and PM peak hours:

- Optimize signal phase splits.

Latson Road & I-96 (EB and WB Ramps)

The increased cycle length at the I-96 Ramps provided some reduction in the delay for the Latson Road left-turn movements; however additional mitigation is recommended through traffic control modifications.

- Upgrade to a fully actuated traffic signal.
- Provide permissive/protected left-turn phasing for the northbound approach at WB I-96.
- Provide permissive/protected left-turn phasing for the southbound approach at EB I-96.

9.1 SIGNAL WARRANT EVALUATION

A signal warrant analysis was performed at the study intersections of Latson Road & Beck Road, Latson Road & Site Drive #1, and Latson Road & Crooked Lake Road. The *Michigan Manual on Uniform traffic Control Devices (MMUTCD)* documents eight warrants by which traffic signal control may or should be considered. Warrant 1 (8-Hour Vehicular Volume), Warrant 2 (4-Hour Vehicular Volume), and Warrant 3 (Peak-Hour) were evaluated for each of the study intersections, based on the future traffic volumes. F&V only collected 4-hours (7-9AM and 4-6PM) of turning movement counts (TMCs); therefore, Warrant 1 A&B were only evaluated based on the available traffic volume data. The results of the signal warrant analyses are discussed below and summarized in **Table 8**; the signal warrant charts are attached for reference.

Table 8: Signal Warrant Analysis Summary

Intersection	Signal Warrants		
Latson Road & Beck Road	Warrant 1: Eight Hour		NO
	Condition A	Hours Met	2
		Warrant Met	NO
	Condition B	Hours Met	4
		Warrant Met	NO
	Warrant 2: Four-Hour	Hours Met	4
		Warrant Met	YES
	Warrant 3: Peak-Hour	Hours Met	4
Warrant Met		YES	
Latson Road & Site Drive #1	Warrant 1: Eight Hour		NO
	Condition A	Hours Met	2
		Warrant Met	NO
	Condition B	Hours Met	4
		Warrant Met	NO
	Warrant 2: Four-Hour	Hours Met	2
		Warrant Met	NO
	Warrant 3: Peak-Hour	Hours Met	2
Warrant Met		YES	
Latson Road & Crooked Lake Road	Warrant 1: Eight Hour		NO
	Condition A	Hours Met	2
		Warrant Met	NO
	Condition B	Hours Met	3
		Warrant Met	NO
	Warrant 2: Four-Hour	Hours Met	2
		Warrant Met	NO
	Warrant 3: Peak-Hour	Hours Met	2
Warrant Met		YES	

Latson Road & Beck Road

- The results of the signal warrant analysis indicates that the study intersection of Latson Road & Beck Road is expected to meet Warrant 2 (Four-Hour) and Warrant 3 (Peak-Hour).
- A traffic signal is **RECOMMENDED** at this intersection.

Latson Road & Crooked Lake Road

- The results of the signal warrant analysis indicates that the study intersection of Latson Road & Crooked Lake Road is expected to meet Warrant 3 (Peak-Hour).
- The majority of the increased delays at this intersection is due to high volume of background traffic growth, and not site generated traffic.
- Therefore, it is recommended to continue monitoring this intersection as the proposed development progresses, to determine if/when a traffic signal would be recommended.

Latson Road & Site Drive #1

- The results of the signal warrant analysis indicates that the study intersection of Latson Road & Site Drive #1 is expected to meet Warrant 3 (Peak-Hour).
- A traffic signal is **RECOMMENDED** at this intersection.
- Exclusive left-turn lanes are recommended on both the eastbound and westbound approaches.

9.2 POTENTIAL RAILROAD CONFLICT EVALUATION (BECK ROAD AND SITE DRIVE #1)

The existing Beck Road intersection is located approximately 340 feet north of the railroad tracks, with an effective northbound queue length of 240 feet. Additionally, the proposed Site Drive #1 is located approximately 340 feet south of the railroad tracks, with an effective southbound queue length of 240 feet. The identified mitigation measures included traffic signal recommendations at both intersections; therefore, this intersection was further evaluated to ensure that operations will not impact the railroad tracks. The results of the analysis are summarized below in **Table 9**.

Table 9: Queue Length Summary (Future IMP)

Intersection	Approach	AM Peak		PM Peak		Available Queue Length (ft)	Exceeds Queue Length
		Average Queue (ft)	95% Queue (ft)	Average Queue (ft)	95% Queue (ft)		
Latson Road & Beck Road	NBL	0	0	0	0	240	No
	NBT	21	59	108	212	240	No
	NBTR	30	79	124	235	240	No
Latson Road & Site Drive #1	SBL	30	68	49	94	240	No
	SBT	25	68	41	91	240	No
	SBR	19	49	10	34	240	No

Key findings from this evaluation:

- The existing Beck Road location has adequate distance from the influence area of the railroad tracks to accommodate the projected northbound queue lengths on Latson Road.
- The proposed Site Drive #1 location has adequate distance from the influence area of the railroad tracks to accommodate the projected southbound queue lengths on Latson Road.
- The recommended improvements include signalization. This signal should include communication and pre-emption with the railroad crossing operations.



9.3 RECOMMENDATIONS SUMMARY

The results of the future conditions with improvements investigation indicates that the following mitigation measures are recommended:

Intersections and Recommended Mitigation Measures	Existing	Background	Future
1. Latson Road & Grand River Avenue			
Optimize the signal timings during both peak periods	✓		
2. Latson Road & WB I-96 Ramps			
Upgrade to a fully actuated traffic signal			✓
Provide permissive/protected northbound left-turn phasing			✓
3. Latson Road & EB I-96 Ramps			
Upgrade to a fully actuated traffic signal			✓
Provide permissive/protected southbound left-turn phasing			✓
4. Latson Road & Beck Road			
Install a fully actuated traffic signal with permissive/protected southbound left-turn phasing			✓
5. Latson Road & Sweet Road / Site Drive #2			
Provide exclusive left-turn and right-turn egress lanes			✓
Construct a southbound right-turn lane along Latson Road at Site Drive #2			✓
6. Latson Road & Crooked Lake Road			
Install a fully actuated traffic signal <i>(It is recommended to continue monitoring this intersection as the proposed development progresses, to determine if/when a traffic signal would be recommended)</i>		✓	
7. Latson Road & Site Drive #1			
Upgrade to a fully actuated traffic signal			✓
Provide exclusive left-turn and right-turn egress lanes (both approaches)			✓
Construct a southbound right-turn lane along Latson Road at Site Drive #1			✓
9. Latson Road & Site Drive #3			
Provide exclusive left-turn and right-turn egress lanes			✓
Construct a southbound right-turn lane along Latson Road at Site Drive #3			✓
Corridor Wide Recommendation			
Increase network cycle length to 90-seconds for all signals along Latson Road (Excluding Grand River Avenue)			✓

Table 10: Future Intersection Operations with Improvements

Intersection	Control	Approach	Future Conditions				Future (w/ IMP)				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
1 Latson Road & Grand River Avenue	Signal	EBL	44.3	D	47.0	D	44.3	D	62.1	E	0.0	-	15.1	D→E
		EBT	35.9	D	42.6	D	49.6	D	64.2	E	13.7	-	21.6	D→E
		EBR	24.5	C	29.6	C	29.9	C	31.0	C	5.4	-	1.4	-
		WBL	181.1	F	195.7	F	50.8	D	91.3	F	-130.3	F→D	-104.4	-
		WBT	30.7	C	58.6	E	31.8	C	50.1	D	1.1	-	-8.5	E→D
		WBR	14.7	B	215.3	F	16.0	B	162.6	F	1.3	-	-52.7	-
		NBL	43.8	D	130.1	F	43.5	D	62.5	E	-0.3	-	-67.6	F→E
		NBT	42.1	D	49.7	D	33.3	C	65.4	E	-8.8	D→C	15.7	D→E
		NBR	221.0	F	37.5	C	93.2	F	31.9	C	-127.8	-	-5.6	-
		SBL	43.9	D	127.0	F	52.2	D	64.8	E	8.3	-	-62.2	F→E
		SBT	33.1	C	41.6	D	31.1	C	50.0	D	-2.0	-	8.4	-
SBR	26.3	C	24.2	C	24.8	C	26.9	C	-1.5	-	2.7	-		
Overall	65.2	E	93.1	F	45.0	D	71.6	E	-20.2	E→D	-21.5	F→E		
2 Latson Road & WB I-96 Ramps	Signal	WBL	36.9	D	29.4	C	44.1	D	40.7	D	7.2	-	11.3	C→D
		WBR	31.4	D	33.6	C	35.9	D	54.0	D	4.5	-	20.4	C→D
		NBL	18.7	B	367.4	F	6.3	A	15.4	B	-12.4	B→A	-352.0	F→B
		NBT	0.5	A	1.0	A	0.4	A	0.6	A	-0.1	-	-0.4	-
		SBT	16.5	B	20.8	C	0.6	A	5.4	A	-15.9	B→A	-15.4	C→A
		SBR	16.4	B	23.4	C	1.1	A	8.9	A	-15.3	B→A	-14.5	C→A
Overall	13.7	B	50.1	D	7.2	A	14.5	B	-6.5	B→A	-35.6	D→B		
3 Latson Road & EB I-96 Ramps	Signal	EBL	25.5	C	29.1	C	29.8	C	35.9	D	4.3	-	6.8	C→D
		EBR	42.1	D	36.1	D	53.9	D	52.2	D	11.8	-	16.1	-
		NBT	9.8	A	9.5	A	9.4	A	4.3	A	-0.4	-	-5.2	-
		NBR	9.5	A	8.3	A	9.5	A	3.8	A	0.0	-	-4.5	-
		SBL	29.7	C	105.9	F	11.7	B	10.4	B	-18.0	C→B	-95.5	F→B
		SBT	0.5	A	0.6	A	0.4	A	0.4	A	-0.1	-	-0.2	-
Overall	17.4	B	20.9	C	17.6	B	12.7	B	0.2	-	-8.2	C→B		
4 Latson Road & Beck Road	Stop (Minor)	EBL	64.4	F	588.4	F	42.7	D	42.6	D	-21.7	F→D	-545.8	F→D
		EBTR	0.0*	A	10.0	B	0.0*	A	29.3	C	0.0*	-	19.3	B→C
		WBL	42.3	E	811.3	F	32.9	D	31.8	C	-2.7	E→D	-779.5	F→C
		WBTR	13.5	B	21.3	C	39.6	A	40.5	D	-12.9	B→A	19.2	C→D
	Signal [IMP]	NBL	0.0*	A	0.0*	A	0.6	A	2.9	A	0.0*	-	0.0*	-
		[NBT]	Free				0.6	A	2.8	A	N/A			
		SBL	10.5	B	13.9	B	1.1	A	7.4	A	-9.6	B→A	-6.5	B→A
		[SBT]	Free				0.9	A	0.9	A	N/A			
[Overall]	N/A				6.2	A	7.1	A	N/A					
5 Latson Road & Sweet Road / Site Drive #2	Stop (Minor)	EBL	29.5	D	414.1	F	27.8	D	387.7	F	-1.7	-	-26.4	-
		EBR	29.5	D	414.1	F	10.7	B	15.2	C	-18.8	D→B	-398.9	F→C
		WB	17.9	C	43.1	E	17.9	C	43.1	E	0.0	-	0.0	-
		NBL	8.6	A	9.8	A	8.6	A	9.8	A	0.0	-	0.0	-
		SBL	8.9	A	9.2	A	8.9	A	9.2	A	0.0	-	0.0	-

Intersection	Control	Approach	Future Conditions				Future (w/ IMP)				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
6 Latson Road & Crooked Lake Road	Stop (All-Way)	EBL	10.7	B	12.8	B	13.4	B	17.5	B	2.7	-	4.7	-
		EBTR	10.2	B	12.2	B	11.2	B	13.5	B	1.0	-	1.3	-
		WBL	10.6	B	14.2	B	11.5	B	15.1	B	0.9	-	0.9	-
		WBTR	11.1	B	15.4	C	13.2	B	17.6	B	2.1	-	2.2	C→B
	Signal [IMP]	NBL	9.0	A	10.5	B	7.4	A	10.2	B	-1.6	-	-0.3	-
		NBTR	23.7	C	64.1	F	8.6	A	7.8	A	-15.1	C→A	-56.3	F→A
		SBL	10.5	B	13.3	B	12.0	B	12.6	B	1.5	-	-0.7	-
		SBTR	12.5	B	70.7	F	6.6	A	7.8	A	-5.9	B→A	-62.9	F→A
		Overall	17.2	C	49.9	E	9.4	A	10.3	B	-7.8	C→A	-39.6	E→B
8 Latson Road & Site Drive #1	Stop (Minor)	EBL	33.5	D	624.7	F	42.9	D	37.4	D	9.4	-	-587.3	F→D
		EBTR	33.5	D	624.7	F	37.7	D	23.4	C	4.2	-	-601.3	F→C
		WBL	13.3	B	20.9	C	38.1	D	24.2	C	24.8	B→D	3.3	-
		WBTR	13.3	B	20.9	C	39.9	D	25.7	C	26.6	B→D	4.8	-
	Signal [IMP]	[NBTR]	Free				3.3	A	11.8	B	N/A			
		SBL	9.6	A	10.2	B	0.7	A	3.5	A	-8.9	-	-6.7	B→A
		[SBT]	Free				0.2	A	0.6	A	N/A			
		[SBR]	N/A				0.4	A	0.1	A	N/A			
		[Overall]	N/A				4.2	A	10.6	B	N/A			
		9 Latson Road & Site Drive #3	Stop (Minor)	EBL	27.5	D	106.1	F	24.8	C	74.4	F	-2.7	D→C
EBR	27.5			D	106.1	F	10.0	B	13.1	B	-17.5	D→B	-93.0	F→B
NBL	8.2			A	9.7	A	8.2	A	9.7	A	0.0	-	0.0	-
SB	Free				Free				Free					

* Indicates no vehicle volume present

The results of the future improvements analysis, with the implementation of the recommended mitigation measures, indicates that all approaches and movements at the study intersection are expected to improve to LOS D or better during both peak periods, with the following exceptions. Review of SimTraffic network simulations indicates acceptable operations, with improved delays and reduced vehicle queues throughout the remaining study roadway network during both peak periods.

Latson Road & Grand River Avenue

- During the AM peak hour: The northbound right-turn movement is expected to continuing operating at LOS F.
- During the PM peak hour: The westbound left- and right-turn movements are expected to continuing operating at LOS F. Additionally, the eastbound, westbound, and southbound left-turn and the eastbound and westbound through movements are expected to operate at LOS E.

Although the intersection is still expected to operate with poor/failing movements, the future improvements conditions are expected to operate better than background conditions without the proposed development. Additionally, the trips generated are expected to increase the intersection volume by 5% or less; therefore, the impact is expected to be negligible, as compared to daily fluctuations in traffic volumes.

Latson Road & Sweet Road / Site Drive #2

- During the PM peak hour: The eastbound left-turn movement is expected to still operate at LOS F and the westbound approach is expected to continue operating at LOS E.



Although the Synchro intersection LOS analysis indicates poor operations for the stop-controlled minor street approaches, review of SimTraffic network simulations indicates acceptable operations. The reported 95th percentile vehicle queue length was approximately 150-feet (~6 vehicles) for the eastbound left-turn movement, which is not significant based on the volume of egress traffic (~110 vehicles). The egress vehicles were observed to find adequate gaps within the stream of through traffic along Latson Road, due to increased gaps within the traffic flow associated with the traffic signal at Site Drive #1.

Therefore, no further improvements are recommended, as vehicles were observed to be processed, without experiencing long delays or excessive vehicle queues. Additionally, motorists have the ability to redistribute themselves to the proposed traffic signal at Site Drive #1, should they begin to experience long delays or queues at this driveway.

Latson Road & Site Drive #3

- During the PM peak hour: The eastbound approach is expected to operate at LOS F.

Although the Synchro intersection LOS analysis indicates poor operations for the eastbound approach, review of SimTraffic network simulations indicates acceptable operations. The reported 95th percentile vehicle queue length was approximately 90-feet (3-4 vehicles) for the eastbound left-turn movement, which is not significant. The egress vehicles were observed to find adequate gaps within the stream of through traffic along Latson Road, without experiencing long delays or excessive vehicle queues. Therefore, no further improvements are recommended at this time. Additionally, motorists have the ability to redistribute themselves to the proposed traffic signal at Site Drive #1, should they begin to experience long delays or queues at this driveway.

10 CONCLUSIONS

The conclusions of this TIS are as follows:

10.1 OPERATIONAL ANALYSIS SUMMARY

The existing AM and PM peak hour vehicle delays and Levels of Service (LOS) were calculated at the study intersections using Synchro (Version 11) traffic analysis software. The results of the analyses were based on the existing and proposed lane use, traffic control shown, and traffic volumes shown on the attached figures, and the methodologies presented in the *Highway Capacity Manual, 6th Edition* (HCM6).

Existing (2023) Conditions

All of the study intersection approaches and movements are currently operating acceptably, at a LOS D or better, during both the AM and PM peak hours, with the exception of the following:

- Latson Road & Grand River Avenue

Background (2043) Conditions

In addition to delays currently experienced at the intersections noted in the existing conditions, the background 2043 conditions analysis indicates that the following additional study intersections are expected to experience operations at LOS E or F:

- Latson Road & Grand River Avenue
- Latson Road & Crooked Lake Road

Future (2043) Conditions

In addition to delays currently experienced at the intersections noted in the existing conditions and the background 2039 conditions analysis, the following additional study intersections are expected to experience operations at LOS E or F with the addition of the proposed development:

- Latson Road & Grand River Avenue
- Latson Road & WB I-96 Ramps
- Latson Road & EB I-96 Ramps
- Latson Road & Beck Road
- Latson Road & Sweet Road / Site Drive #2
- Latson Road & Site Drive #1
- Latson Road & Site Drive #3

Potential Railroad Conflict Evaluation (Beck Road and Site Drive #1)

- The existing Beck Road and proposed Site Drive #1 intersections are located approximately 340 feet from the railroad tracks, with effective queue lengths of approximately 240 feet. Improvements at these intersections are recommended, including the installation of a traffic signal. The results of the analysis indicates that the study intersections have adequate distance from the influence area of the railroad tracks to accommodate the projected vehicle queue lengths on Latson Road.

10.2 ACCESS MANAGEMENT

Latson Road Geometry

- The projected traffic volumes associated with this development does not require a wide boulevard section and median U-turns to accommodate the traffic operations. Additionally, a wide boulevard section would require indirect left-turns. The railroad tracks are too close to the north site driveway to accommodate a median U-turn.
- A narrow median would have the same operations at the site driveway intersections; however, residential driveways and other parcels along the corridor will be impacted by a median. Bi-directional median openings are not recommended.
- A center two-way left-turn lane (TWLTL) will work well through this section of Latson Road. A center TWLTL can be a potential concern if there is a high density of commercial driveways along the corridor. If future development is proposed to the east of the site, further evaluation of Latson Road should be considered at that time.

Site Drive #2 / Sweet Road

- The proposed Site Drive #2 is offset from the existing Sweet Road intersection. The operations and safety of this was reviewed and in general, it is preferable to align the existing and proposed access points; however, due to site limitations, alignment is not feasible. Key findings of this review are summarized below:
 - The volume of traffic on Sweet Road is relatively low.
 - The ingress left-turn volumes are *not* conflicting.
 - The egress left-turn volumes will have conflicting movements; however, the volume of egress left-turns on Sweet Road is very low. Therefore, the chances of this conflict occurring are minimal.

Overall, the proposed intersection and the offset with Sweet Road is expected to operate acceptably. As the development progresses, additional improvements at this intersection may be considered to mitigate operational delay and the intersection offset, including: signalization or a roundabout.

Auxiliary Turn Lane Analysis

LCRC does not maintain auxiliary right-turn lane or taper warrants; therefore, MDOT warrant charts were utilized. The results of the analysis indicate the following:

Site Driveway Intersection	Right-Turn Treatment	Left-Turn Treatment
NB Latson Road & Site Drive #1	No Treatment	N/A
SB Latson Road & Site Drive #1	RT Lane	N/A
Latson Road & Site Drive #2	RT Lane	No Treatment
Latson Road & Site Drive #3	RT Lane	No Treatment
Crooked Lake Road & Site Drive #4	No Treatment	No Treatment

The deceleration turn lanes and tapers should be constructed in accordance with LCRC standards and specifications.

11 RECOMMENDATIONS

The recommendations of this TIS are summarized below.

Intersections and Recommended Mitigation Measures	Existing 2023	Background 2043	Future 2043
1. Latson Road & Grand River Avenue			
Optimize the signal timings during both peak periods	✓		
2. Latson Road & WB I-96 Ramps			
Upgrade to a fully actuated traffic signal			✓
Provide permissive/protected northbound left-turn phasing			✓
3. Latson Road & EB I-96 Ramps			
Upgrade to a fully actuated traffic signal			✓
Provide permissive/protected southbound left-turn phasing			✓
4. Latson Road & Beck Road			
Install a fully actuated traffic signal with permissive/protected southbound left-turn phasing			✓
5. Latson Road & Sweet Road / Site Drive #2			
Provide exclusive left-turn and right-turn egress lanes (eastbound approach)			✓
Construct a southbound right-turn lane along Latson Road at Site Drive #2			✓
6. Latson Road & Crooked Lake Road			
Install a fully actuated traffic signal <i>(It is recommended to continue monitoring this intersection as the proposed development progresses, to determine if/when a traffic signal would be recommended)</i>		✓	
7. Latson Road & Site Drive #1			
Upgrade to a fully actuated traffic signal			✓
Provide exclusive left-turn and right-turn egress lanes (both approaches)			✓
Construct a southbound right-turn lane along Latson Road at Site Drive #1			✓
9. Latson Road & Site Drive #3			
Provide exclusive left-turn and right-turn egress lanes			✓
Construct a southbound right-turn lane along Latson Road at Site Drive #3			✓
Corridor Wide Recommendation			
Increase network cycle length to 90-seconds for all signals along Latson Road (Excluding Grand River Avenue)			✓

Any questions related to this memorandum, study, analysis, and results should be addressed to Fleis & VandenBrink.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Michigan.

Attached: Figures 1 – 6
Traffic Volume Data
SEMCOG Data
Signal Timing Permit
Synchro / SimTraffic Results
Auxiliary Turn Lane Warrant
Signal Warrants

**Attachments removed to reduce file size.
Contact the Township to review the full
report.**

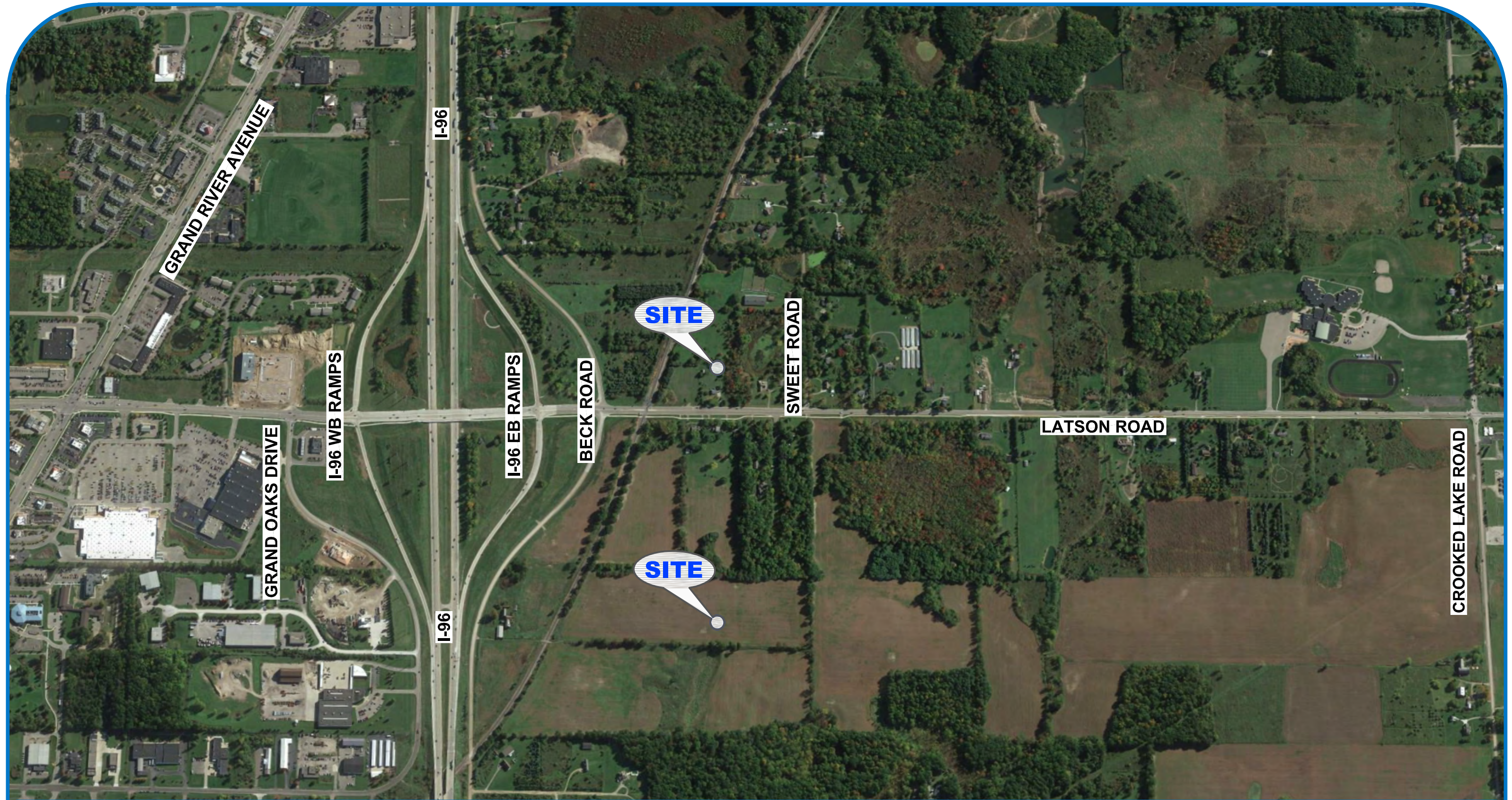
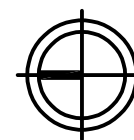


FIGURE 1
SITE LOCATION MAP

VERSA DEVELOPMENT TIS - GENOA TWP, MI

LEGEND

 SITE LOCATION



NORTH
 SCALE: NOT TO SCALE





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June 1, 2023

Via Federal Express and E-Mail

Kelly VanMarter
Assistant Township Manager
Genoa Township
2911 Dorr Road
Brighton, MI 48116

Re: Amended And Restated Planned Unit Development Agreement—Innovation Interchange—Latson Road

Dear Kelly:

Enclosed in connection with the above matter are four (4) copies of a draft Amended and Restated PUD Agreement for Innovation Park—Latson Road PUD. A pdf of this Agreement would have been emailed to you yesterday. At this stage exhibits are not included (except for the Table of Approved/Prohibited Land Uses) because they will be subject to review and revision during the Township review process. But all of the documents that would likely be included as exhibits have been submitted as part of the application package.

Let me know if you have any questions. Thank you.

Sincerely,

Dykema Gossett PLLC

Alan M. Greene

Enclosure

cc: Todd Wyett (via email only: todd@versacos.com)
Brad Strader (via email only: bstrader@mkskstudios.com)
Haley Wolfe (via email only: hwolfe@mkskstudios.com)
Eric Lord (via email only: elord@atwell-group.com)

**AMENDED AND RESTATED PLANNED UNIT DEVELOPMENT AGREEMENT
(INNOVATION PARK - LATSON ROAD)**

This **Amended and Restated Planned Unit Development Agreement** (the “Agreement”) is made as of the ___ day of _____, 2023 (the “Effective Date”), by and between **Latson Partners, LLC, Latson Farms, LLC and Covenant of Faith, LLC** (collectively, the “Original Developer”), and **Latson Beck, LLC and Latson South, LLC** (collectively the “Expansion Land Developer”), whose address is 326 E. Fourth Street, Suite 200, Royal Oak, Michigan 48067, on the one hand, and the Charter Township of Genoa (the “Township”), whose address is 2911 Dorr Road, Brighton, Michigan 48116, on the other hand. The Original Developer and Expansion Land Developer are collectively referred to as the “Developer.”

RECITATIONS

A. Original Developer is the owner of approximately 200 acres of land located on the west and east sides of Latson Road, south of the I-96 expressway, as legally described on **Exhibit 1** attached hereto (the “Original PUD Property”). The Original PUD Property is more particularly described as follows: (1) tax identification nos. 4711-08-400-004, 4711-08-400-006, 4711-08-400-012 through -015, 4711-08-400-020 and 4711-08-400-031, owned by Latson Properties; (2) tax identification no. 4711-09-300-001 owned by Covenant of Faith; and (3) tax identification no. 4711-17-200-008 owned by Latson Farms.

The 2013 Master Plan did not contemplate residential.

and incorporated by reference in the 2023 Master Plan.

B. The Latson Road/I-96 interchange was completed in approximately 2013. This new interchange provided the Township with the opportunity to create a new development district for coordinated, well-planned, large-scale mixed-use business, light industrial, high tech, office, commercial, ~~residential uses~~ and related development, as described in, among other things, the Township’s 2013 Master Plan Update. While all of the Original PUD Property ~~is currently~~ zoned CE (or Country Estate) under the Township’s Zoning Ordinance, the Master Plan designates most of the Property for development as a new Campus Planned Unit Development (or “CAPUD”) and the remainder of the Original PUD Property (defined below as the Commercial Area) for development as an Interchange Commercial Planned Unit Development (or “ICPUD”). The intent of both the CAPUD and ICPUD districts is to promote comprehensive and long-term planning of appropriate land uses, innovative architectural design, high quality building materials and updated access management strategies with a walkable environment for pedestrians.

C. The Original PUD Property consists of approximately one-half of the land designated as CAPUD in Article 10 of the Zoning Ordinance. Having one developer in control of such a large portion of the CAPUD project area, provides the community with a unique opportunity to plan and coordinate the long-term development, uses and interrelationship of the uses for the benefit of the Township and its residents.

D. In order to carry out a proposed long-term development plan of research, office, light industrial, high tech, commercial and other business development, with consistent high-quality design standards, natural resource preservation, public amenities and improvements and inter-connectivity of land uses, Original Developer submitted a request to rezone the land located in the West Area and East Area defined below to CAPUD and the land in the North Area defined

below to ICPUD (the “Project,” also known as “Innovation Park”), in accordance with Article 10 of the Zoning Ordinance, the Michigan Zoning Enabling Act, MCL 125.3101 *et. seq.*, and subject to the terms and conditions of this Agreement.

for the original PUD property including

E. The Township Planning Commission reviewed the rezoning request, the Conceptual PUD Site Plan and Impact Statement and conducted a public hearing as required under the Zoning Ordinance at its meeting held on June 11, 2020, and unanimously recommended approval of the Project to the Township Board and Livingston County Planning Commission as satisfying the requirements of the review standards set forth in the Zoning Ordinance.

original PUD

F. At its meeting held on July 15, 2020, the Livingston County Planning Commission considered the Project and unanimously recommended approval of same to the Township Board.

original PUD

G. At its regular meeting held on August 3, 2020, the Township Board conducted another public hearing on the Project and after finding that the rezoning and Conceptual PUD Site Plan satisfied the standards and objectives of the Zoning Ordinance and Master Plan, approved the PUD rezoning, the Conceptual PUD Site Plan and execution of the PUD Agreement, as reflected in the minutes of said meeting attached hereto as **Exhibit 2**, subject to the conditions of this Agreement and other conditions reflected in the meeting minutes, including, among other things, the public road and landscaping improvements, preservation of natural resources, installation of public amenities, inclusion of pathways and landscaped gathering areas, public utility improvements and dedication of land for future expansion of Latson Road.

H. The parties entered into a Planned Unit Development Agreement (“Original PUD Agreement”) as of September 30, 2020, which was recorded on October 6, 2020, with the Livingston County Register of Deeds.

I. The Original PUD Agreement provided for the potential expansion of the PUD project area in the event that the Original Developer entered into agreements to acquire certain lands located south and north of the Original PUD Property. Original Developer, through related entities Latson Beck, LLC and Latson South, LLC, has acquired or entered into agreements to acquire a total of approximately 129 acres of property located west of Latson Road to the south of the Original PUD Property (owned by Latson South, LLC), and 9 acres of property along Beck Road, east of Latson Road and north of the railroad tracks (owned by Latson Beck, LLC), as more particularly described and depicted on **Exhibit 3** hereto (collectively, the “Expansion Property”).

Include similar statement about the northern area.

J. The Expansion Property is zoned CE (or Country Estate) and the southern 129 acres is Master Planned for future transitional use. The Original PUD Agreement provided that the parties would work in good faith to amend the Original PUD Agreement to add the Expansion Property to the Project and reflect any mutual agreement on the nature and scope of development of the Expansion Property, which may include expansion of the permitted CAPUD uses or other transitional land uses, ~~including residential uses.~~

K. Developer prepared Concept Plans, with alternative land use options, for the future use and development of the Expansion Property and the integration of such development with the Original PUD Property. The Planning Commission reviewed the rezoning requests for the Expansion Property, the Concept Plans for the integrated Project, the Revised Impact Statement and proposed amendment to the PUD Agreement and conducted a public hearing

Residential Uses were NOT explicitly listed. There needs to be more of an explanation why residential land uses are appropriate as a transitional land use.

There must be a written explanation of how the expansion area land uses are compatible with 10.03.06(c)(2) (c). This development agreement must also address the timed incremental expansion of the CAPUD as indicated by zoning ordinance 10.03.06(i).

required under the Zoning Ordinance at its meeting held on _____, 2023, and recommended approval of the PUD rezoning for the Expansion Property, the Concept Plans and this Amended and Restated PUD Agreement to the Township Board as satisfying the requirements and the Zoning Ordinance, Master Plan and the Original PUD Agreement.

L. At its regular meeting held on _____, 2023, the Township Board conducted another public hearing on the revised Project and after finding that the rezoning and concept PUD Site Plan for the Expansion Property and integration of same with the Original PUD Property satisfies the standards and objectives of the Zoning Ordinance and Master Plan, approved the PUD rezoning for the Expansion Property and the revised Conceptual PUD Site Plan for the Expansion and integration of same with the Original PUD Site Plan and execution of this Amended and Restated PUD Agreement, as reflected in the minutes of said meeting attached hereto as **Exhibit 4**.

NOW, THEREFORE, in consideration of the foregoing premises, which the Township and Developer represent to be true and accurate, and which shall be incorporated into the parties' obligations set forth herein, the parties intending to be legally bound by this Agreement, agree as follows:

1. **Designation of Development Areas.** The Project shall be divided into 5 development areas as follow:

a. the approximate 200.2 acres located on the west side of Latson Road as depicted on the Preliminary Concept for Land Uses, Major Roadways and Open Space (the "PUD Plan") shall be designated as the "High Tech/Light Industrial Area" and is now zoned CAPUD;

was 177 acres in original PUD

These acreages don't correspond directly to the concept plan. Consider including a graphic or referencing an exhibit.

b. the approximate 10 acres located on the east side of Latson Road as depicted on the PUD Plan shall be designated as the “Mixed Use Area” and is now zoned CAPUD;

c. the approximate 15 acres located on the east side of Latson Road and north of the railroad tracks as depicted on the PUD Plan shall be designated the “Accessory Commercial Area” and is now zoned ICPUD;

d. the approximate 39.5 acres of land depicted on the PUD Plan on the west side of Latson Road and south of the High-Tech/Light Industrial Area shall be designated as the “High-Tech/Light Industrial/Transitional Multi-Family Area” and is now zoned CAPUD, and

e. the approximate 64.3 acres of land located on the west side of Latson Road and north of Crooked Lake Road to the south of the High-Tech/Light Industrial/Transitional Multi-Family Area, as depicted on the PUD Plan, shall be designated as the “Accessory Residential Area” and is now zoned CAPUD

2. **Conceptual PUD Plan.** The PUD Plan attached hereto as **Exhibit 5** is hereby approved by the Township as the PUD plan for the entire Project. The PUD Plan is conceptual and illustrative in nature and depicts the general nature and interrelationship of uses in the development areas. The specific size and nature of any particular building or use and the relationship of such uses and buildings to each other within the development areas will be subject to revisions based on the specific uses and businesses that may be attracted to the development areas over time.

3. **Permitted Uses.** Notwithstanding anything contained in the Zoning Ordinance to the contrary, but subject to all of the terms and conditions of this Agreement and Exhibits hereto:

We need to review this attachment.

In the original PUD each use had its own exhibit, now everything is in one exhibit. Each use should be broken down to its own exhibit so there is no confusion. There should also be a map on each area exhibit similar to the original PUD.

but table doesn't say that, that language was included in the original PUD, and in the original PUD auto repairs was prohibited but not in this amendment. This amended documents needs to include that language.

a. The High-Tech/Light Industrial Area may be developed for any of the uses or combination of uses set forth in **Exhibit 6** hereto, including for high tech research and development, light industrial, office, hotel and any combination of such uses and necessary uses;

b. The Mixed Use Area may be developed for any of the uses or combination of uses set forth in **Exhibit 6** hereto, including for business and professional offices, medical offices, high-tech, research and development and light industrial uses, retail services and restaurants.

c. The Accessory Commercial Area may be developed for any of the uses or combination of uses set forth in **Exhibit 6** hereto, including for a hotel, restaurant, retail uses and a gas station with accessory retail and food services, with the proviso that no more than one gas station, which shall not be a truck stop, shall be developed on the entirety of the Project Area. This Accessory Commercial Area is intended to provide, among other things, commercial services to interstate travelers and to the much larger High-Tech, Light Industrial Area located on the west side of Latson Road, as well as existing and planned residential areas south of I-96. Subject to first obtaining approval from the Genoa Charter Township Planning Commission, the portion of the Accessory Commercial Area situated north of Beck Road may be used for the erection of a stand-alone project sign as discussed in paragraph 7 below for the entire development of sufficient height to be visible from I-96, which shall include a reference to Genoa Charter Township and its official logo.

d. The High-Tech/Light Industrial/Transitional Multi-Family Area may be developed in whole for any of the uses or combination of uses set forth in **Exhibit 6** for

A narrative about the compatibility and transitional purpose of the multi-family area should be provided.

I think we should specify the location for the single gas station.

justification for alternative multi-family uses should be provided with descriptions for how/when multi-family would be an appropriate transitional land use to consider.

the High-Tech/Light Industrial uses, or may be developed in the alternative for Multi-Family uses as set forth in the PUD Plan as shown on **Exhibit 5**.

e. The Residential Area may be developed for multi-family uses as a transition from the High-Tech/Light Industrial/Transitional Multi-Family Area to the north and further transitioning to single-family residential use as shown in **Exhibit 6** hereto.

f. Through its review of the PUD application materials and the public hearings and meetings held in connection therewith, the Township Board has determined that any of the uses designated as “P” (or Permitted) contained in **Exhibit 6** are specifically approved herein as Permitted uses. It is further agreed that any use permitted as of right for the High-Tech/Light Industrial Area as set forth in **Exhibit 6** includes a building up to 200,000 square feet on the first floor of the building as a Permitted use without the requirement of obtaining a special land use approval.

4. **Hotel in High-Tech/Light Industrial, or Mixed Use and/or Accessory Commercial Areas.** A hotel in the High-Tech/Light Industrial, or Mixed Use and/or Accessory Commercial Areas is a permitted use but is limited in height to 4 stories. If a hotel is located more than 500 feet from a residential structure, the hotel may be a maximum of 5 stories as a special land use.

5. **Special Land Uses.** Any of the uses designated as “SLU” (or Special Land Use) contained in **Exhibit 6**, or any uses similar to or compatible with other special uses not specifically listed in the CAPUD and/or ICPUD districts, as applicable to the Property, such uses may be permitted upon determination of the Township Board following a recommendation by the Planning Commission as required by Township ordinance 10.03.06 (c) in effect as of 2023, and shall be subject to all of the terms and conditions of this Agreement. A building in

was approved by the Planning Commission on March 14, 2022.

excess of 200,000 square feet on the first floor shall be treated as a special land use and shall require special land use approval from the Township under the provisions of the Zoning Ordinance. The parties recognize that all potential future uses may not be listed in the Township Zoning Ordinance or on **Exhibit 6** as permitted or special uses, and therefore a non-listed use is subject to consideration pursuant to and in compliance with § 10.03.06 (c) (2) (c) of the Zoning Ordinance in effect at the time of executing this Agreement. Excerpts from the Zoning Ordinance are attached hereto as **Exhibit 7**.

6. **Prohibited Uses.** Certain land uses identified as prohibited in **Exhibit 6** hereto are prohibited from being located within the Project Area.

7. **Project Gateway and Area Entry Signage.** The approved A concept plan for a Project gateway sign to be located north of Beck Road in the Accessory Commercial Area is attached as **Exhibit 8** hereto. The final Project gateway sign shall be subject to ~~Planning Commission review and shall be approved if it contains the same quality and nature of materials and contains the Genoa Township gateway messaging in the same general character and design shown in **Exhibit 8**, and is otherwise in compliance with all applicable Federal, State and County laws.~~ In addition, Developer shall be permitted to install a Project sign at each entrance to any part of the Project Area. A detailed signage plan for each Area of the Project shall be submitted with the first application for site plan approval for each such Development Area. accessory

8. **Development Standards.** The Project is intended to be a focal point of interchange oriented high-tech, office, light industrial, commercial and other business activity in the community and ~~transitional residential uses~~ and to attract various high tech, office, light industrial and commercial businesses that would take advantage of synergy of location and the expressway access and desire to be a part of a high quality, integrated business development plan

Include standards for the Latson Road frontage in the expansion area.

housing opportunities for employees and users of the commercial services.

Individual buildings and site amenities and landscaping are intended to be of high quality and design and include diverse building materials. All development within the Project Area shall adhere to the PUD Design Guidelines set forth in the **Exhibit 9** hereto. No single building may be in excess of 200,000 square feet on the first floor except that the Township Board may grant special land use approval for a larger building as previously provided.

9. ~~**Latson Road Frontage and Highway Visibility Zone.**~~ The facades of the sides of all buildings fronting along Latson Road on both the East and West Areas shall incorporate materials of enhanced durability, including combinations of brick, stone, glass, pre-cast concrete, metal panels, brick and flush metal panels and other equally durable and attractive materials as illustrated by the example facades in the PUD Design Guidelines. Additional screening and landscaping requirements and upgraded building materials as described on page __ of the PUD Design Guidelines shall apply to each portion of a building that is both within the Highway Visibility Zone depicted on the PUD Plan and visible from I-96.

10. **Future Road Improvements.** In addition to comprehensive traffic studies undertaken in connection with the development of the Latson Road/I-96 interchange, the Developer prepared additional traffic impact studies in connection with the Project, which have been accepted by the Township and the Livingston County Road Commission (“Road Commission”). The Developer will undertake certain road improvements to Latson Road at the intersections to the Project Area as described in the traffic impact study prepared by Fleis & Vanderbrink dated September 13, 2019, as supplemented by a memo dated November 17, 2019, and further supplemented by an updated Traffic Study prepared May 31, 2023 (to address the expansion of the Project Area), which may include the installation of a traffic signal at the north

Also include standards for Crooked Lake Road frontage - either large buffer or large lot residential.

We should encourage/require connections in all project areas that are planned for interchange campus or commercial development. Not just residential

Developer,

access point to the Project Areas. The timing of installation of road improvements shall be determined and assessed by the Road Commission in connection with updated traffic impact assessments submitted in connection with future final site plans for building construction in the Project Areas. While the PUD Plan calls for the construction of a southern access to the West Area to be offset from Sweet Road, the Developer agrees to modify the PUD Plan to install an access aligned with Sweet Road if approved by the Road Commission provided that the Road Commission or the Township obtains all rights-of-way and/or easements necessary for achieving such road alignment. Any future road development will provide for internal interconnectivity for each phase of the Project.

11. **Future Road Connection to Adjacent Properties.** Site plans submitted for development in the Residential Area shall consider and show potential future road connections to lands to the east and west of the Residential Area for potential future development of such adjacent lands in order to address future road circulation and achieve interconnectivity objectives.

Add a statement that the road connections do not assume a similar project type, land use or density but are strictly for access management.

12. **Latson Road Greenbelt.** As part of the development of any initial building phase in the High-Tech/Light Industrial Area, Developer shall install the Latson Road Streetscape Improvements as depicted on the PUD Plan and in the PUD Design Guidelines along the Developer's entire property frontage on the west side of Latson. As part of the development of any initial phase in the East Area, Developer shall install the Latson Road Streetscape Improvements as depicted on the PUD Plan and in the PUD Design Guidelines along the Developer's entire property frontage on the east side of Latson.

13. **Dedication of Land for Road Right of Way and Future Expansion of Latson Road.** The Developer's land currently extends to the center line of Latson Road. In connection

with the submission of an application for site plan approval for the first phase of any development within the Project Area, Developer shall dedicate to Livingston County Road Commission or Genoa Charter Township a strip of land sixty (60') feet in width from the center line of Latson Road along the frontage of all of the Developer's Property on Latson Road (or approximately ___ acres of land), without compensation from the Township or the County Road Commission. This dedication could accommodate the future widening of Latson Road to 5 lanes along with a small median. The dedication shall be subject to Developer's right to include Project signage and landscaping within the dedicated right-of-way until such time as it is used for any widening of Latson Road, at which time such signage will be relocated at Developer's expense and must comply with State, County and local law. In the event that the Road Commission should ever determine to (a) improve Latson Road adjacent to the Property, such as by widening the road with or without a median, installation of street lighting and/or (b) install a traffic signal at or near the intersection of Latson and Sweet Road (collectively "Future Road Improvements"), Developer agrees to participate in a special assessment district, or other mechanism mutually agreed upon by the parties, to pay its pro rata share of the costs of the Future Road Improvements along the frontage of Developer's Property on Latson Road and for the ongoing maintenance of the landscaping, traffic signal, lighting and other improvements (i.e. walkways) in the right-of-way or within the medians, if constructed. This Agreement constitutes the Developer's approval of including its Property within a special assessment district and approval of the purpose of the assessments, but Developer retains the right to object to or challenge the pro rata allocation of costs among benefitted properties to pay for the Future Road Improvements and ongoing maintenance of the Improvements as permitted and in compliance

Include additional details about the buffers from adjacent residential.

with State law. The Developer’s obligations hereunder shall be reflected in any condominium or other association agreement and shall run with the land.

14. **Project Amenities.** The Developer agrees to preserve natural features on the Property and install various Project amenities as conceptually described in the Open Space and Amenity Plan attached as **Exhibit 10**. The Project amenities shall include:

was 6 acres and 1000 feet

a. Preservation of approximately __ acres of open space and wooded/wetlands, with approximately up to __ feet of frontage along Latson Road.

b. Detention Ponds with open space amenities on approximately 6 acres of uplands and wooded/wetlands in the southwest corner of the High-Tech/Light Industrial Area and incorporation of same into the stormwater management plan.

c. Walking and biking pathways will be installed throughout the Project Area and will provide interconnectivity to the various buildings within the development and access to the preserved natural features and the Latson Road pathway system.

and uses

d. A pathway within the Latson Road right-of-way (to be dedicated to the County as described above) shall be installed in all Project Area locations abutting Latson Road.

e. Buffers from natural features and adjacent residential areas or structures shall be installed as conceptually depicted on the Open Space and Amenity Plan.

f. Landscaped rest or gathering areas (or pocket parks) with benches, bike racks, bike air and repair stations will be installed in appropriate locations as conceptually depicted in the Open Space and Amenity Plan.

g. Attractive and landscaped site entrance features at the intersection of Latson Road and the interior access roads to the Project Areas. Decorative light fixtures at the

was 3.8

such as.....

Project entrances off of Latson Road shall be included as part of the site entrance features.

h. A marked pedestrian connection across Latson Road at the north entrance roads tying the properties located to the east and west sides of Latson Road together shall include an attractive pedestrian crossing, with materials such as stamped concrete used to designate the pedestrian crossing and pedestrian actuated crossing signals.

i. Dedication of approximately __ acres of land as right-of-way for Latson Road.

j. Pocket parks and other recreational amenities in the residential areas.

Connected sidewalks throughout the project on both sides of the street.

k. The Pump Station anticipated to serve the Project shall be screened by landscaping, to be installed at the Developer's expense, which is compatible and consistent with the landscaping plans for Latson Road frontage development within the Project. Developer shall also preserve surrounding trees and natural area to the extent it can reasonably do so in order to further screen the Pump Station. Any walls visible from a public or private road associated with a building or structure installed to house equipment shall be compatible with the character of the Project and shall consist of attractive high-quality materials similar to those provided in the design standards in Exhibit 8 for buildings. All building and landscaping plans for the Pump Station shall be submitted in advance to the Township for Planning Commission review and approval.

The Open Space and Amenity Plan is conceptual as to the precise nature and location of amenities, which will be later finalized and approved as part of the final site plan approval for the phases of the Development. But it is understood and agreed by the parties that amenities of the nature and scope of what is conceptually shown in the Open Space and Amenity Plan are integral to the approval of the PUD and are required for final

There should be exhibits showing how the property will be served. Qualification for the PUD requires water and sewer and this agreement should show the proposed plans and should consider the expansion area and how that may or may not change the layouts previously presented.

site plan approval. The specific amenities may be installed over time in phases to correspond to the phases of development proposed for site plan approval by the Developer.

15. **Off-Site Public Utilities.** The Project will be served by public sewer and water.

The Township, through its consulting engineers, TetraTech, has developed a South Latson Road Water and Sanitary Sewer Improvement Plan (the "Utility Plan") in order to extend public sewer and water to serve the new Interchange Planned Unit Development districts described in the Zoning Ordinance, and which districts include the Property. Developer worked with the Township on the planning, engineering and construction of sewer and water service extensions from north of I-96 from Grand Oaks Drive and Kohl's to points south of the railroad tracks abutting the Property as depicted on **Exhibit 11** (the "Utility Project"). As provided in the Original PUD Agreement, the Developer paid the cost of such off-site Utility improvements (the "Payment") and undertook the construction and served as construction manager for the Utility Project. The Township hereby confirms that Developer undertook and completed the construction of the Utility Project in a manner consistent with the Utility Plan as developed by Tetra Tech in conjunction with the Township. The Utility Project, which will ultimately be owned and operated by the Genoa-Oceola Sewer and Water Authority (G-O) and the Marion, Howell, Oceola, and Genoa Sewer and Water Authority (MHOG), was constructed in conformance with the Authority's Engineering Design Standards and Connection Manual, including inspection and testing of the utilities. Further extension of utilities by the Developer onto the Property, either through the Property or in the public road rights-of-way, shall be constructed in phases consistent with the final site plans for each such phase to be submitted by the Developer and approved by the Township.

shall be funded

Future extension plans shall be included. There should also be requirements about the "transition" or expansion area being served by water/sewer secondary to the research/dev and high tech area. Sewer/water should not be extended south until substantial development occurs in the north consistent with the future land use plan.

There is no SAD district therefore no allocated REU's. Do we need this sentence?

We should establish a baseline for what capacity we can reserve.

6. **Reservation of Utilities and Tap Fees.** The Township agrees to reserve sufficient sewer and water capacity for the Project so long as this Agreement remains in effect.

If Developer acquires any expansion area as described further below, Developer shall be entitled to any additional REUs allocated to such expansion area. In consideration of, among other things, the Payment, for a period of ten (10) years following the Township's grant of final site plan and final engineering plan approval for the first phase of any development in the Project, Developer shall be entitled to a sewer and tap fee in the amount of \$4,947 per REU for sewer taps and \$4,770 per REU for water taps. Thereafter, the cost of sewer and water taps shall be the ordinary fee in effect at the time such additional water and sewer taps are requested.

17. **Perimeter and Internal Building Setbacks; Height Limitations.** All setback and height standards are set forth in the PUD Design Guidelines and, regardless of any deviation of the PUD Design Guidelines from any existing or future Zoning Ordinance standard or requirement, the PUD Design Guidelines shall govern and apply to the development of the Project. Variances from such PUD Design Guidelines in connection with the final site planning and engineering for any building or group of buildings may be requested by the Developer and may be granted in the exercise of reasonable discretion by the Township Board upon recommendation of the Planning Commission and upon a showing that such variances will result in a development consistent with the terms of this Agreement, the Exhibits hereto and the CAPUD Zoning District and, to the extent applicable, the ICPUD Zoning District.

18. **Final Site Plan/Project Phasing.** The Project, including without limitation, Project roadways, amenities and on-site utilities associated with each phase, may proceed in multiple phases, with any phase being a single building or multiple buildings (a "Phase"), and multiple phases may proceed at the same time (for example, separate building projects may

This agreement should indicate that these reduced rates have been provided because the developer is fully funding the expansion and provision of sanitary sewer and water throughout the development.

Add back in " However, no building shall commence construction in the accessory commercial/mixed use area until at least one building is under construction and proceeded substantially towards completion in the high/tech light industrial area.

occur in the High Tech/Light Industrial Area while a building is being constructed in the Accessory Commercial Area). It is the intent that the Project will be established as one or more business/commercial and residential condominiums. Condominium units or sites may be leased by Developer or sold to other parties, including end-user businesses. Any site or unit leased, sold or developed shall be subject to the terms and conditions of this Agreement, which shall run with the land as described below, and will be subject to condominium documents and/or an agreement regarding covenants, easements and restrictions, in forms approved by the Township for consistency with this Agreement and applicable Township ordinances. The Township shall review such condominium or covenant agreements, and shall approve them to the extent they are consistent with the terms and conditions of this Agreement and other applicable Township ordinances. Any final site plan for a building or phase within the Development shall contain the information required in Article 10.08.02 of the Zoning Ordinance (included in **Exhibit 7**), and such final site plan shall be approved if it is consistent with the terms of this Agreement and satisfies other ordinance requirements. In the event of any conflict between the terms of this Agreement and Exhibits hereto and any current or future ordinance provision of the Township, this Agreement and Exhibits hereto shall control

19. **Maintenance Obligations.** The internal roads, signage, pedestrian amenities, lighting, entry features, storm drainage, sidewalks, landscaping and other common elements installed within the development areas shall be maintained by the Developer until one or more condominium or other property owners' associations takes over such maintenance responsibilities in accordance with the condominium or association agreements. Upon assumption of the association's responsibility of such maintenance, the Developer shall have no further obligation hereunder with respect to maintenance of the common improvements.

There must be included provisions for the timing of development in the expansion/transition area. We want appropriately timed and incremental southward expansion of the campus to ensure that the research/business park develops BEFORE the residential. See 10.03.06(i).

This was in the original PUD. We should specify the start date.

Separate associations may be established with respect to the maintenance and repair of the common elements for each Project Area. The maintenance of any roads, signage, pedestrian amenities, lighting, entry features, storm drainage, sidewalks, landscaping and other elements installed within the development area not assumed by a condominium or other property owner's association remain the obligation of the Developer.

20. **Timing of Development.** Because of the size, scope and diversity of the proposed Project, the parties understand that this will be a long-term development and that the PUD Plan shall operate in effect as a master future land use plan for the Project and agree that the following time periods shall apply to the Development:

a. **Expiration of PUD Agreement** – PUD Agreement shall expire in 7 years if no private roads or buildings in connection with an approved final site plan for a first phase of the Development are constructed to completion unless extended by the Township Board following a recommendation by the Planning Commission.

b. **Expiration of Site Plans** – Individual site plans as required by Township Ordinance for structures and/or private roads and related infrastructure for each phase of the Development are valid for a period of 3 years after final approval. The approved site plan must be constructed to completion within the 3 years following final approval; otherwise the approval for that site plan is null and void unless an extension is granted by the Township Board following a recommendation by the Planning Commission.

c. **Subsequent Site Plan Approval** – The purpose of paragraph 20.c. is to address the concerns of the developer getting additional site plans approved for properties the developer still owns. The developer envisions selling parcels of land to others, and desires to avoid delay in having new site plans reviewed and approved because of delays

or problems that exist with site plans for parcels the developer no longer owns. The intent of paragraph 20.c., is that the developer is required to make substantial progress on site plans that the developer owns at the time the new site plans are submitted, but any delay or difficulties with site plans for property the developer does not own will not impact the review and approval process for the new site plans. The Township shall only be required to approve subsequent final site plans within a Development Area provided that the previously approved site plans within that same Development Area of which the Developer still has an ownership interest in the property which is the subject of those previously issued site plans has made substantial progress in the development and construction identified in those site plans unless the developer makes a showing of good cause for not having made such progress and otherwise complies with this Agreement and state and local laws. The term substantial progress is defined to include carrying out the terms of the final site plan, such as obtaining the necessary engineering approvals and permits for construction and, when permits have been issued, the actual physical construction or development of the required improvements identified in the site plan such as roads, utilities, landscaping, pathways, storm water and other amenities associated with the site plan as well as the construction of a building identified in the site plan, if applicable, are being undertaken and that the pace of such engineering and permit approvals and, if applicable, ongoing construction demonstrates that it shall be substantially completed prior to the expiration of the site plan unless extended as provided in paragraph 20(b) above. The developer shall have a vested right with respect to the future development identified in such site plans provided that substantial progress has been made in the preceding 24 months, unless extended by mutual agreement of the

This should be updated with new names/description.

parties. For purposes of this Agreement, a showing of good cause for an extension of time includes a showing of lack of market demand due to economic recession or other conditions, despite good faith and reasonable efforts by the Developer to market such units or sites within the Project areas. Furthermore, if at the time of submission of a new site plan application, the Developer does not have an ownership interest in the property which is the subject of the previously issued site plans, the Developer commits to assist the Township to ensure the previously issued site plans have made substantial progress in the development and construction identified in the non-owned site plans. Nothing in this paragraph is intended to preclude Developer from pursuing multiple site plans at the same time.

21. **Termination or Expiration of PUD Plan.** In the event this Agreement expires or terminates for any reason, the rezoning classifications identified in the Recitations shall remain, and any change in the zoning must be by application to the Township and fully compliant with the laws of the State of Michigan. The expiration or termination of this Agreement for any reason does not result in the zoning reverting to its previous classification of Country Estates. In the event the PUD Plan has expired for lack for progress as described above, the expiration shall only apply to the undeveloped areas of the Project. Developer may at any time after expiration of the PUD Plan submit and pursue a new PUD Plan for the remaining undeveloped areas of the Project in accordance with the procedural requirements of the Zoning Ordinance in effect at the time of submission.

22. **Addition of Other Property.** The **Accessory Commercial Area** may be expanded to include adjacent properties located east of Latson and north of the railroad tracks which are acquired by or under control of Developer. The High-Tech/Light Industrial Area may

Clarify that no land uses, densities or similar type of developments are assumed or authorized for any lands adjacent to the project area. Ability to expand is not the right to develop.

be expanded to include adjacent properties located on the west side of Latson Road. The Residential Area may also be expanded to include adjacent properties located along Latson Road to the east of the Residential Area and north of Crooked Lake, or properties located to the west of the Residential Area and north of Crooked Lake. Such expansions may, at Developer's discretion, be reflected in a revised concept plans which will be adopted as an amendment to this Agreement or may be pursued as a separate PUD provided that the Developer shall comply with the terms of this Agreement and Township Ordinances that are in effect to the extent such Ordinances are not inconsistent with this Agreement.

23. **Agreement Consistent With Police Powers.** The action of the Township in entering into this Agreement is based upon the understanding that many of the land use, design and environmental objectives of the Township are reflected in the design of the development as proposed and the Township is thus achieving its police power objectives and has not, by this Agreement, bargained away or otherwise compromised any of its police power objectives.

24. **Entire Agreement.** This Agreement, the exhibits attached hereto, if any, and the instruments which are to be executed in accordance with the requirements hereof set forth all the covenants, agreements, stipulations, promises, conditions, and understandings between the Township and the Developer concerning the Project as of the date hereof, and there are no covenants, agreements, stipulations, promises, conditions or understandings, either oral or written, between them other than as set forth herein.

25. **Relationship Of The Parties.** The relationship of the Township and the Developer shall be defined solely by the expressed terms of this Agreement, including the implementing documents described or contemplated herein, and neither the cooperation of the parties hereunder nor anything expressly or implicitly contained herein shall be deemed or

construed to create a partnership, limited or general, or joint venture between the Township and the Developer, nor shall any party or their agent be deemed to be the agent or employee of any other party to this Agreement.

26. **Modification.** Except as provided below, this Agreement can be modified or amended only by a written instrument expressly referring hereto and executed by the Township and the Developer, its successors and assigns. The PUD Design Guidelines are in effect a living document and may be updated or revised as follows to reflect specific site conditions, special projects or users, changes in market conditions and future trends and best practices in planning and design: minor changes as determined by the Township's professional staff in the exercise of reasonable discretion may be approved administratively; and major changes as determined by the Township's professional staff in the exercise of reasonable discretion shall be submitted to the Township Board for consideration and decision following a recommendation by the Planning Commission. Any change requires the mutual consent of the Township and Developer. To the extent the Property is subdivided in the future either through a site condominium or land division, modifications with respect to any individual parcel or site within the condominium may be made by the owner of the parcel or site and the Township, provided that any such modification does not adversely impact any other property within the Project area.

27. **Michigan Law To Control.** This Agreement and the rights and obligations of the parties hereunder shall be construed in accordance with Michigan law.

28. **Due Authorization.** The Township and the Developer each warrant and represent to the other that this Agreement and the terms and conditions thereof have been duly authorized and approved by, in the case of the Township, its Board of Trustees, and as to the Developer, by the appropriate officers or members of the companies constituting the Developer,

and that the persons who have executed this Agreement below have been duly authorized to do so.

29. **Agreement To Run With The Land; Recording.** This Agreement shall be binding upon and inure to the benefit of the parties to this Agreement and their respective heirs, successors, assigns and transferees, and shall run with the Property. This Agreement shall be recorded by Developer at its expense with the office of the Livingston County Register of Deeds and a copy provided to the Township.

30. **Counterparts.** It is understood and agreed that this Agreement may be executed in several counterparts, each of which, for all purposes, shall be deemed to constitute an original and all of which counterparts, when taken together, shall be deemed to constitute one and the same agreement, even though all of the parties hereto may not have executed the same counterpart. Delivery via facsimile or PDF transmission of a counterpart of this Agreement as executed by the parties making such delivery shall constitute good and valid execution and delivery of this Agreement for all purposes.

31. **Termination of Original PUD Agreement.** Upon execution and recording of this Agreement, the Original PUD Agreement shall automatically be deemed null and void in its entirety and of no further force or effect. If requested by either party, a notice of termination of the Original PUD Agreement may be recorded with the Livingston County Register of Deeds.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first set forth above.

[Signatures on following pages]

“DEVELOPER”

Latson Partners, LLC
a Michigan limited liability company

By: _____
Todd Wyett
Its: Manager

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by Todd Wyett, the Manager of Latson Partners, LLC, a Michigan limited liability company, on behalf of the company.

Notary Public
_____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires: _____

“DEVELOPER”

Latson Farms, LLC
a Michigan limited liability company

By: _____
Todd Wyett
Its: Manager

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by Todd Wyett, the Manager of Latson Farms, LLC, a Michigan limited liability company, on behalf of the company.

Notary Public
_____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires: _____

“DEVELOPER”

Covenant of Faith, LLC
a Michigan limited liability company

By: _____
Todd Wyett
Its: Manager _____

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by Todd Wyett, the Manager of Covenant of Faith, LLC, a Michigan limited liability company, on behalf of the company.

Notary Public
_____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires: _____

“EXPANSION LAND DEVELOPER”

Latson Beck, LLC

By: _____
Todd Wyett
Its: Manager

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by Todd Wyett, the Manager of Latson Beck, LLC, on behalf of the company.

Notary Public
_____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires: _____

“EXPANSION LAND DEVELOPER”

Latson South, LLC

By: _____
Todd Wyett
Its: Manager

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by Todd Wyett, the Manager of Latson South, LLC, on behalf of the company.

Notary Public
_____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires: _____

“TOWNSHIP”

GENOA TOWNSHIP,
a Michigan municipal corporation

By: _____
Its: Supervisor

STATE OF MICHIGAN)
) ss.
COUNTY OF LIVINGSTON)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by _____, Supervisor of Genoa Township, a Michigan municipal corporation, on behalf of the corporation.

Notary Public
Livingston County, Michigan
Acting in Livingston County, Michigan
My Commission Expires: _____

and

By: _____
Its: Clerk

STATE OF MICHIGAN)
) ss.
COUNTY OF LIVINGSTON)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by _____, Clerk of Genoa Township, a Michigan municipal corporation, on behalf of the corporation.

Notary Public
Livingston County, Michigan
Acting in Livingston County, Michigan
My Commission Expires: _____

Drafted by and when recorded return to:

Alan M. Greene, Esq.
Dykema Gossett PLLC
39577 Woodward Avenue, Suite 300
Bloomfield Hills, MI 48304

EXHIBIT 1
(Legal Descriptions of Original Properties)

EXHIBIT 2

(Minutes of Township Board Meeting dated August 3, 2020)

EXHIBIT 3

(Legal Description of Expansion Properties)

EXHIBIT 4

(Minutes of Township Board Meeting dated ____, 2023)

EXHIBIT 5
(PUD Plan)

EXHIBIT 6
(Permitted/Prohibited Uses)

VERSA PUD: Permitted Land Uses in Innovation

Interchange Business Park (see map)

P= Permitted; SLU= Special Land Use

Types of Uses (see also regulation by size as noted at the bottom of the table)	Versa PUD: Innovation Interchange
OFFICE, RESEARCH & DEVELOPMENT, LIGHT INDUSTRIAL	
Offices, including: executive, medical, administrative, and professional, including architecture, planning, and engineering	P
Conference Centers	P
Multimedia production facilities	P
Corporate and technical education and training facilities	P
Data processing and computer centers, including computer programming and software development, training, and service of electronic data processing equipment	P
Research and Development, Pilot or Experimental Product Development	P
Distribution facilities, air freight forwarders, expediting and delivery services, and warehousing establishments, including wholesale trade (includes whole sale and industrial distributors, warehousing, freight forwarders, wholesale assemblers) if located at least 500 feet from Latson Road	P
Distribution and other facilities listed above when within 500 feet of Latson Road	SLU
Light industrial as defined in the Genoa Township Zoning Ordinance	P
MEDICAL	
Hospitals, medical urgent care facilities/centers/clinics, medical research facilities, diagnostic, optical, and pharmaceutical and other laboratories	P
USES PERMITTED ONLY WHEN ACCESSORY TO A MEDICAL USE	
Educational facilities for training of interns, nurses, and allied health care personnel	P
Multiple family housing for use by physicians, interns, nurses, allied health personnel and their families	P
Ambulance service and maintenance facilities	P
Helipads, heliports, and helistops	SLU
Accessory mobile medical technology unit	P
OTHER	
Hotels	P
Day care centers	P
Pet Day Care and overnight boarding	P
Indoor recreation facilities, health clubs, and studios	P
OTHER USES, ACCESSORY USES	
Public facilities and uses to serve the district including police, fire, EMS, public utilities, and communications	P
Accessory Outdoor storage of materials used in the operation of the Principal Use screened from view along public roads or the expressway	SLU
Accessory parking of vehicles, trucks, trailers and equipment. Any parking of semi-trailers or trucks of more than 24 hours is prohibited in the front yard. Area of parking must be shown on the site plan and specify screening from view.	P
Accessory buildings and accessory uses customarily incidental to any of the above principal uses permitted; however, accessory uses shall not exceed 50% of the gross building area (e.g., general office, child care, food service, health/workout rooms intended for use by employees, not the general public).	P
SIZE RESTRICTIONS	
Any permitted use over 200,000 square feet	SLU
Uses similar to, and compatible with, other permitted uses and not listed as Prohibited, as determined by the Planning Commission	P

Add back in the map showing the area this list of uses applies to.

VERSA PUD: Commercial Use Table

VERSA PUD: Permitted Land Uses in Commercial Area (see map)

Types of Uses	Versa PUD: Commercial
COMMERCIAL AND SERVICE	
Auto services	P
Offices, including: executive, medical, administrative, and professional, including architecture, planning, and engineering	P
Entertainment (movie theaters, indoor commercial recreation, etc.)	P
Financial Institutions	P
Groceries including specialty foods or beverage that may include seating or take out service	P
Hotels	P
Indoor commercial recreation or fitness centers (excluding dome structures)	P
Microbrewer or small distiller, pubs and growler stores	P
Pet supplies or grooming, pet day care	P
Personal Service establishments such as dry cleaners, cellular phone, nail or beauty salons, consulting services	P
Pharmacies which may include drive through service	P
Restaurants and coffee shops including take out, fast casual and sit down with or without drive-through service	P
Retail/Service (General, not listed above)	P
Self storage	P
Offices, including: executive, medical, administrative, and professional, including architecture, planning, and engineering	P
Urgent Care Centers	P
ACCESSORY USES	
Accessory uses, buildings, and structures customarily incidental to any of the above. Examples include security work, administration offices, and storage and distribution incidental to the primary use of the site	P

Add area map showing which properties this section is for.

original PUD limited to one auto service/gas station use and prohibited auto repairs. This needs to be added back in.

Add back in conference centers as permitted use.

Consider adding "fast food" as allowable use.

Remove self storage as an allowable use.

VERSA PUD: Mixed Use Table

VERSA PUD: Permitted Land Uses in Mixed Use Area (see map)

Add area map showing which properties this section is for.

Types of Uses	Versa PUD: Commercial
MIXED USE	
Auto services	P
Mixed use (including horizontal or vertical mix of residential with commercial)	P
Offices, including: executive, medical, administrative, and professional, including architecture, planning, and engineering	P
Conference Centers	P
Entertainment (movie theaters, indoor commercial recreation, etc.)	P
Financial Institutions	P
Groceries including specialty foods or beverage that may include seating or take out service	P
Hotels	P
Indoor commercial recreation or fitness centers (excluding dome structures)	P
Microbrewer or small distiller, pubs and growler stores	P
Pet supplies or grooming, pet day care	P
Personal Service establishments such as dry cleaners, cellular phone, nail or beauty salons, consulting services	P
Pharmacies which may include drive through service	P
Restaurants and coffee shops including take out, fast casual and sit down with or without drive-through service	P
Retail/Service (General, not listed above)	P
Offices, including: executive, medical, administrative, and professional, including architecture, planning, and engineering	P
Urgent Care Centers	P
ACCESSORY USES	
Accessory uses, buildings, and structures customarily incidental to any of the above. Examples include security work, administration offices, and storage and distribution incidental to the primary use of the site	P

Eliminate this use. This has moved to the commercial area.

There are inconsistencies in the PUD Design guidelines and the PUD. The PUD Agreement should be revised to be consistent with the design guide.

VERSA PUD: Multifamily Use Table

VERSA PUD: Permitted Land Uses in Southwest Area (see map)

Types of Uses	Versa PUD: Commercial
MULTIFAMILY	
Townhouses, row houses, and similar attached dwellings with individual entrances and garages	P
Housing for the elderly, including interim care units, extended care units, congregate care and nursing care	P
RESIDENTIAL CARE	
Adult foster care family home (6 or fewer adults)	P
Foster family home (6 or fewer children 24 hours per day)	P
Family day care home (6 or fewer children less than 24 hours per day)	P
Group day care home (7 to 12 children less than 24 hours per day)	
ACCESSORY USES	
Accessory home occupations	P
Accessory uses, buildings and structures customarily incidental to any permitted use	P
Keeping of pets	P
INSTITUTIONAL USES	
Essential public services	P
RECREATIONAL USES	
Publicly owned parks, parkways, scenic and recreational areas, and other public open space	P
Private non-commercial parks, nature preserves and recreational areas owned and maintained by home-owners association	P

Add area map showing which properties this section is for.

Consider revising this list of allowable uses to include the types of missing middle housing discussed in the design guidelines.

VERSA PUD: Single Family Use Table

VERSA PUD: Permitted Land Uses in Southwest Area (see map)

Types of Uses	Versa PUD: Commercial
SINGLE FAMILY	
Single family detached dwellings	P
RESIDENTIAL CARE	
Adult foster care family home (6 or fewer adults)	P
Foster family home (6 or fewer children 24 hours per day)	P
Family day care home (6 or fewer children less than 24 hours per day)	P
ACCESSORY USES	
Accessory home occupations	P
Accessory uses, buildings and structures customarily incidental to any permitted use	P
Keeping of pets	P
INSTITUTIONAL USES	
Essential public services	P
RECREATIONAL USES	
Publicly owned parks, parkways, scenic and recreational areas, and other public open space	P
Private non-commercial parks, nature preserves and recreational areas owned and maintained by home-owners association	P

Add area map showing which properties this section is for.

VERSA PUD: Prohibited Uses (applies throughout the project)

Types of Uses	Prohibited
Manufacture of automobiles and bodies, trucks, engines, batteries, etc.	X
Blast furnace, steel furnace, blooming or rolling mill; smelting of copper, iron, or zinc ore	X
Painting, sheet metal and welding shops, metal and plastic molding and extrusion shops	X
Production, refining, storage of petroleum and other flammable or combustible materials	X
Deep well injection of hazardous waste or non-hazardous waste	X
Incineration of garbage or refuse	X
Junk yards and salvage yards	X
Hazardous waste recycling, incineration, treatment, transfer, storage or disposal	X
Non-hazardous waste transfer stations, treatment, storage or disposal facilities	X
Sludge composting	X
Truck Terminals	X
Truck driving schools	X
Lumber and planing mills	X
Metal plating, buffing, and polishing	X
Sheet metal stamping operations	X
Commercial kennels	X
Storage facilities for building materials, sand, gravel, stone, lumber, open storage for construction contractor's equipment and supplies	X
Truck Stops	X
Laundry, dry-cleaning establishments or pick-up stations	X
ACCESSORY USES	
Accessory outdoor storage of raw materials, supplies, equipment, and products - occupying an area exceeding 25% of the floor area of the principal building	X

Add area map showing which properties this section is for.

Add back in auto repair and self storage facilities.

Prohibit outdoor storage in the commercial & mixed use zones.

Considering adding: "More than one auto service/gas station".

EXHIBIT 7
(Zoning Ordinance Excerpts)

EXHIBIT 8
(Gateway Sign)

EXHIBIT 9
(PUD Design Guidelines)

EXHIBIT 10
(Open Space and Amenity Plan)

EXHIBIT 11
(Concept Utility Connection Plan)

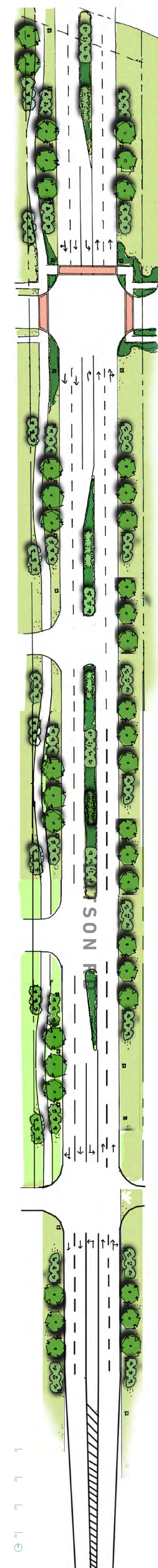
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OVERALL PLAN

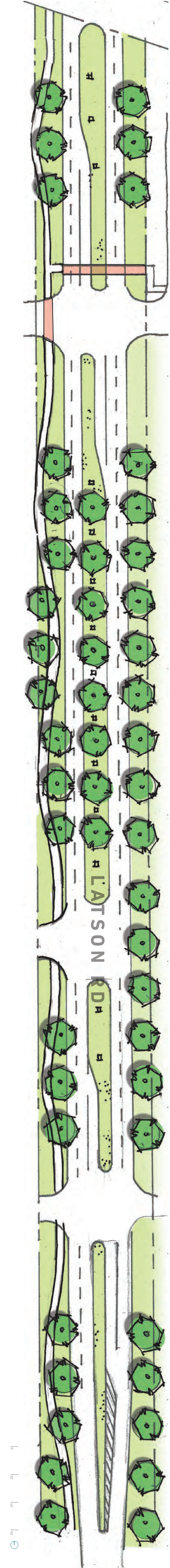


Commercial and mixed use concepts illustrate potential uses and access configuration.

Option 1:
30 ft
median



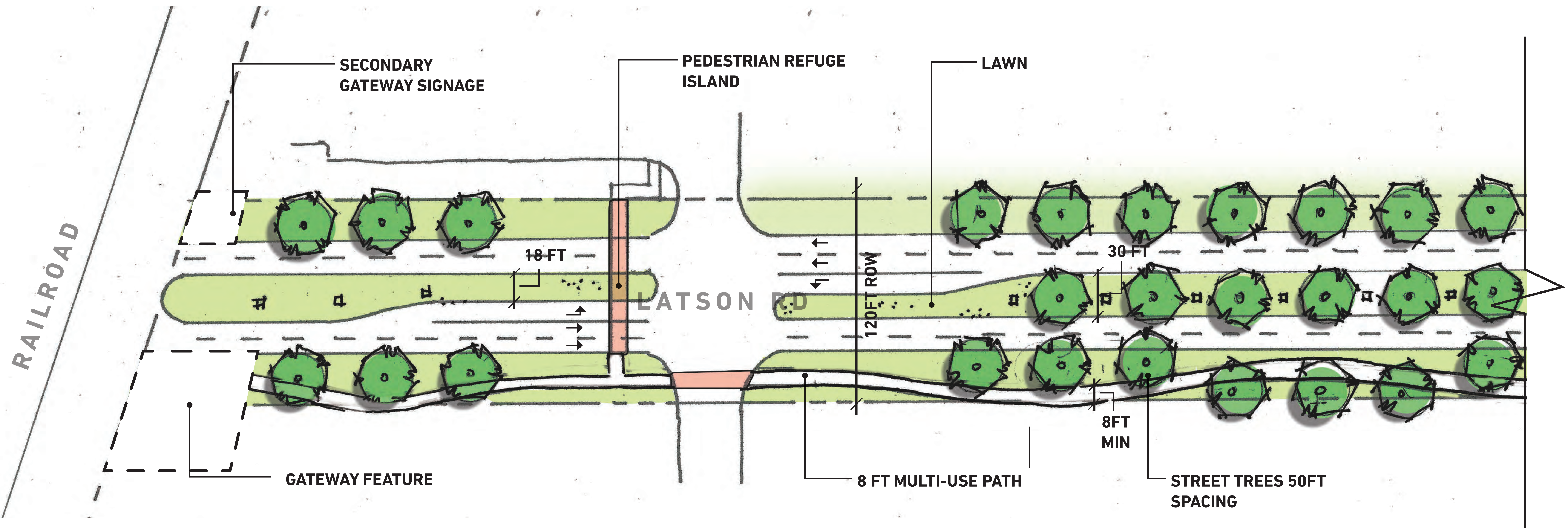
Option 2:
15 ft
median



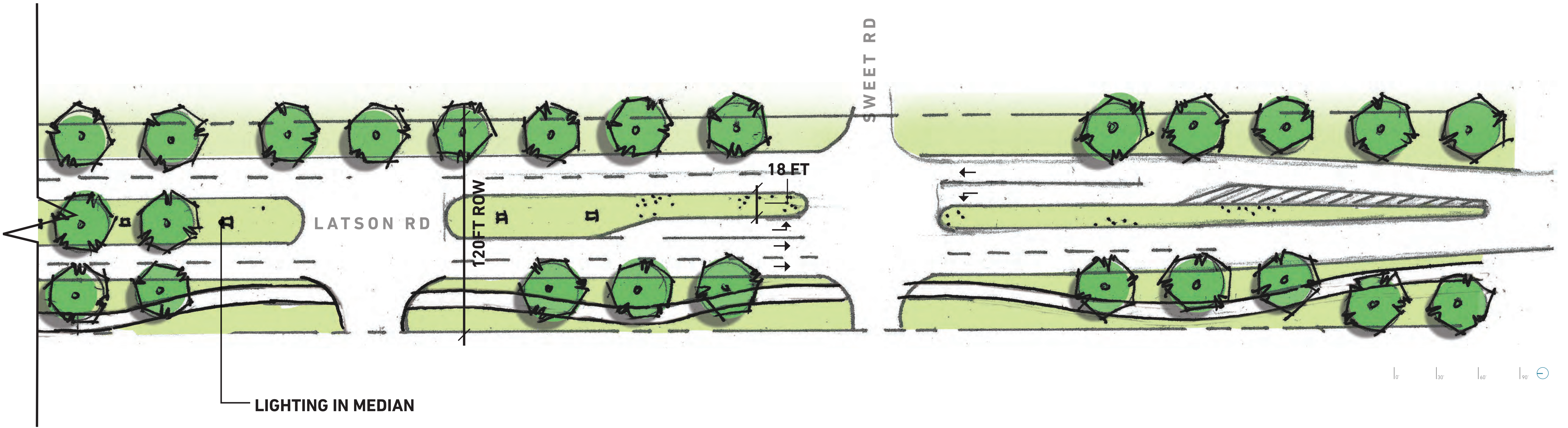
INNOVATION INTERCHANGE

Preliminary Concepts

LATSON ROAD LANDSCAPE : Option 1

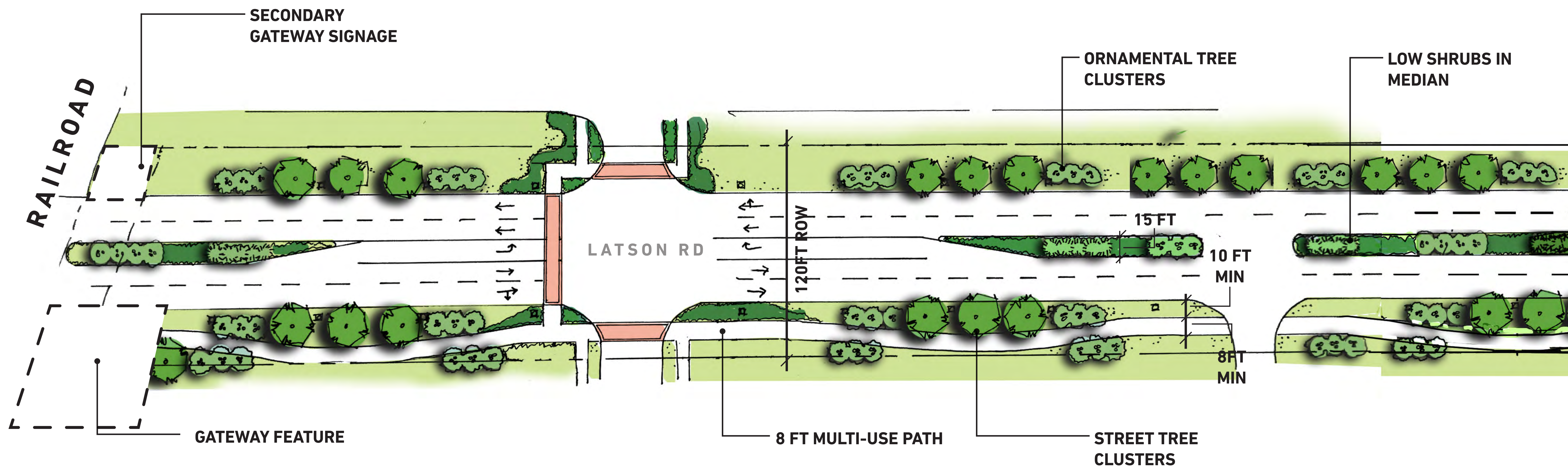


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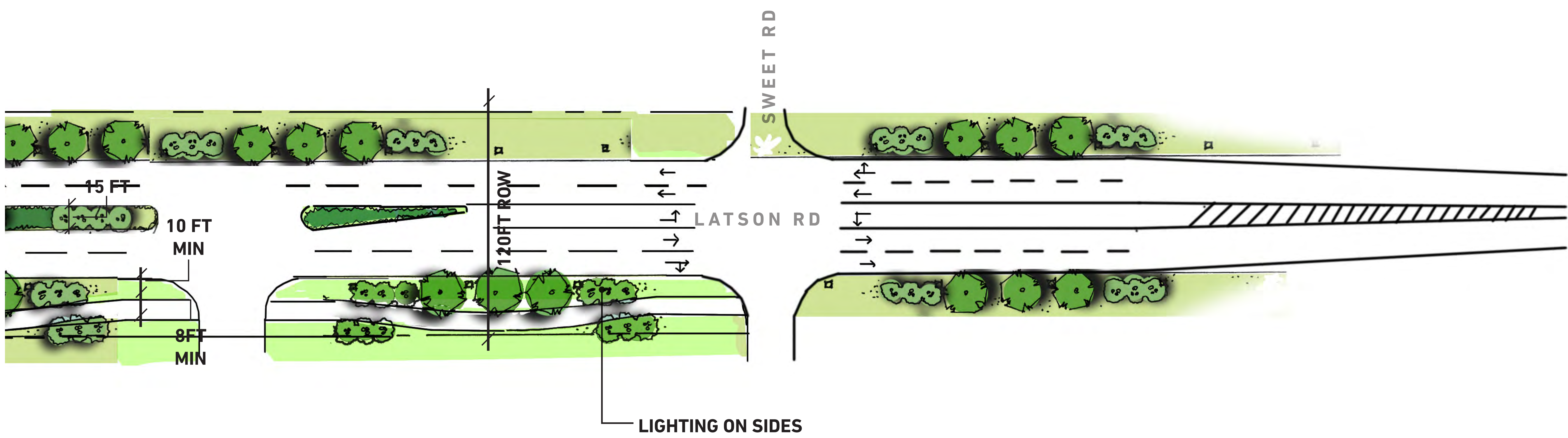


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LATSON ROAD LANDSCAPE : Option 2

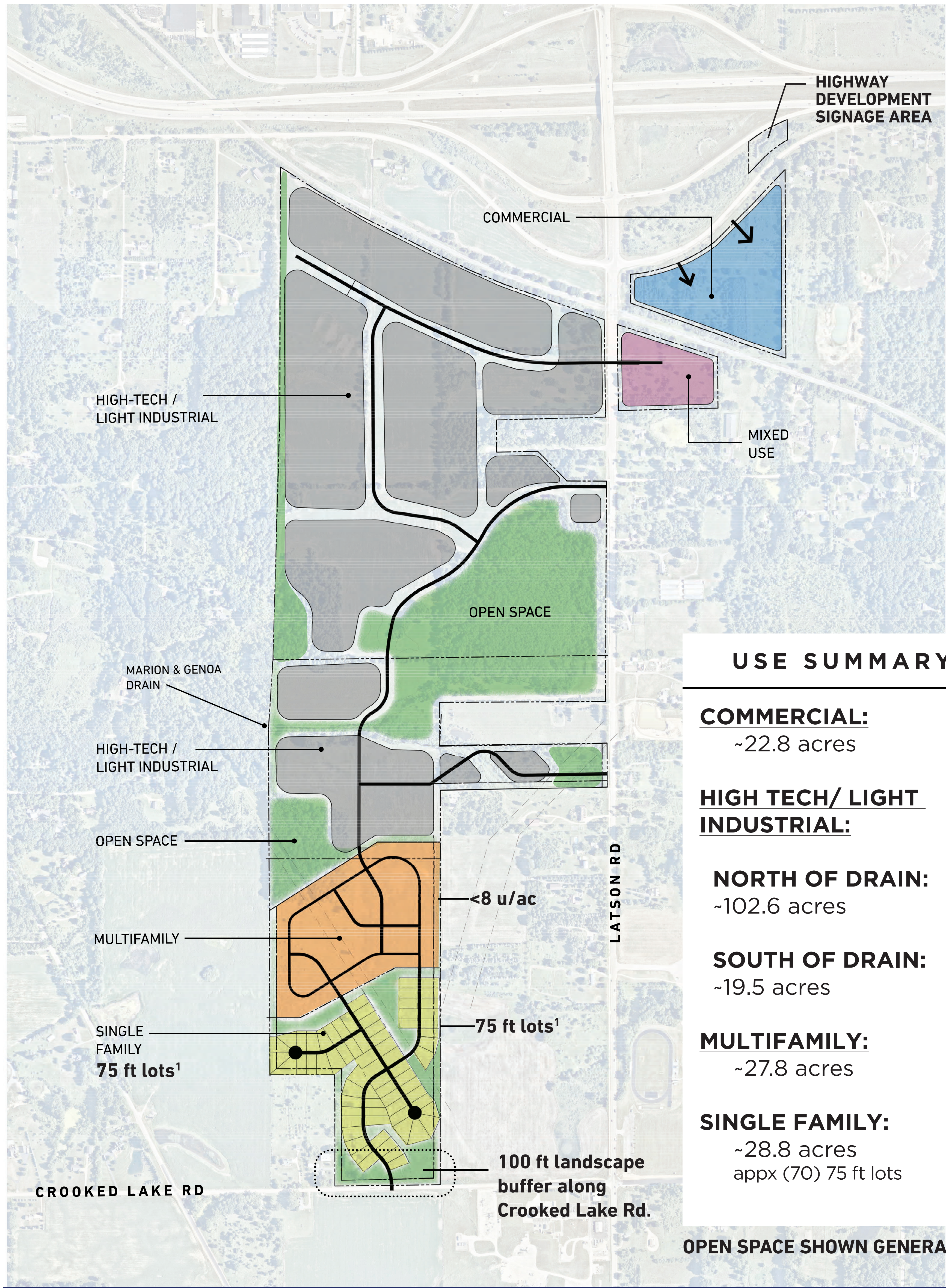


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0 30 60 90

PRELIMINARY CONCEPTS FOR LAND USES, MAJOR ROADWAYS AND OPEN SPACE



USE SUMMARY

COMMERCIAL:
~22.8 acres

HIGH TECH/ LIGHT INDUSTRIAL:

NORTH OF DRAIN:
~102.6 acres

SOUTH OF DRAIN:
~19.5 acres

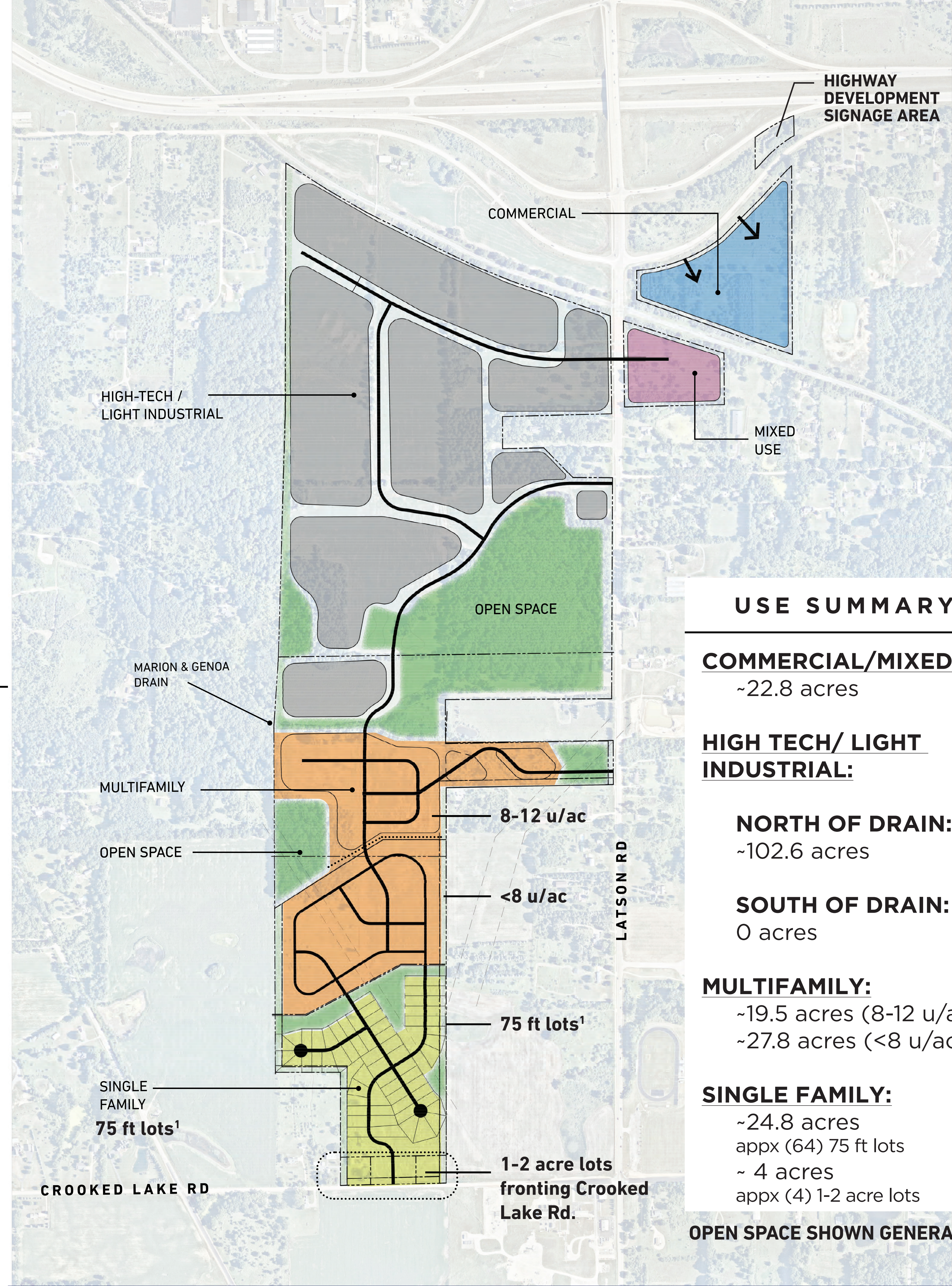
MULTIFAMILY:
~27.8 acres

SINGLE FAMILY:
~28.8 acres
appx (70) 75 ft lots

OPEN SPACE SHOWN GENERALLY

OPTION A

¹ The minimum lot width will be 75 ft consistent with the Medium Density Residential (MDR) District, provided that the Developer and Township may agree upon a 70 ft width if additional open space is provided in the development.



USE SUMMARY

COMMERCIAL/MIXED USE:
~22.8 acres

HIGH TECH/ LIGHT INDUSTRIAL:

NORTH OF DRAIN:
~102.6 acres

SOUTH OF DRAIN:
0 acres

MULTIFAMILY:
~19.5 acres (8-12 u/ac)
~27.8 acres (<8 u/ac)

SINGLE FAMILY:
~24.8 acres
appx (64) 75 ft lots
~ 4 acres
appx (4) 1-2 acre lots

OPEN SPACE SHOWN GENERALLY

OPTION B

¹ The minimum lot width will be 75 ft consistent with the Medium Density Residential (MDR) District, provided that the Developer and Township may agree upon a 70 ft width if additional open space is provided in the development.



INNOVATION INTERCHANGE PUD DESIGN GUIDELINES

GENOA TOWNSHIP, MICHIGAN

UPDATED JUNE 20, 2023

OVERVIEW

Generally, the design of the Innovation Interchange Planned Unit Development will follow the standards described in the Genoa Township Zoning Ordinance and the applicable specifications of other agencies involved in the approval process. These guidelines are considered as a supplement to those standards. Generally, the more restrictive standard between the Zoning Ordinance and these guidelines will apply. These guidelines may be modified as the specific types of uses and site plans are developed for each development or PUD phase.

Some of the standards herein are more restrictive than is typically required by the zoning ordinance, such as certain landscape and lighting specifications. In other cases, the dimensional standards in the guidelines are more generous than the ordinance would otherwise allow, as permitted by the "Flexibility in Design" provisions in Section 10.01.03 of the Genoa Township's PUD Article, in the Zoning Ordinance.

A general comparison of existing zoning ordinance standards to the PUD is shown on the table on the next page. In addition, the architectural standards herein vary somewhat from the Township's standards, specifically to allow other durable materials besides brick. Standards for external building materials are based on high quality designs similar to those illustrated in these guidelines.

Phase 2 of the Planned Unit Development proposal will introduce diverse land use scenarios, including some high tech/light industrial uses, multifamily residences, and single-family homes. To respond to the market as the project progresses, multiple land use configurations will be shown. The development will comply with Township design standards, zoning ordinances, and other relevant regulations, ensuring that the project aligns with the Township's vision for the community's future.

GENOA TOWNSHIP, MI



PROJECT TEAM:

**DESIGN GUIDELINES
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ORIGINAL DEVELOPER:
Latson Partners, LLC, Latson Farms, LLC and Covenant of Faith, LLC

EXPANSION LAND DEVELOPER:
Latson Beck, LLC and Latson South, LLC

326 E. Fourth Street, Suite 200, Royal Oak, Michigan 48067

HIGH TECH/LIGHT INDUSTRIAL DEVELOPMENT INTENT

These guidelines are intended to illustrate the design quality anticipated with the commercial and light industrial portions of the PUD. The "Owner" of the PUD or subsequent purchaser of land will be responsible for providing these guidelines to design professionals who will be involved in the preparation of site plans. Specific compliance will be described in more detail with a site plan that will be submitted to the Township for approval.

In general these guidelines include the following components:

1. A description of architecture supplemented with photographs from similar developments to illustrate the general outcomes expected consistent with the standards to support a deviation from the Township's standards that would otherwise apply.
2. Specific parking requirements associated with the intended uses along with a provision to permit a reduction for shared parking when uses have different peak parking occupancy hours.
3. Efforts to share access to reduce the number of driveways and provide good traffic operations along Latson Road.
4. Provision of additional height for modern-style light industrial and R+D buildings, and a hotel, up to 4 stories or 5 stories as a Special Land Use (in conjunction with setbacks from existing single family homes as illustrated on an exhibit).
5. Some flexibility in the building setbacks.
6. An overall open space concept plan with representative amenities.
7. A greenbelt along Latson Road that exceeds Genoa Township requirements and plant sizes that are larger than required at installation.
8. A reduction in street trees along the internal industrial streets, but provisions for a variety of street tree species.
9. Additional lighting standards to reduce lighting impacts on adjacent homes to the west.
10. Provision for three project entry signs, one at each entrance. These signs may include name plates for major buildings or businesses in the PUD.
11. Allowance for a project identification sign visible to traffic along I-96. The height and design shall be negotiated with Genoa Township.

The following table provides a comparison summary between the zoning requirements of the Genoa Township Zoning Ordinance and the proposed Versa PUD standards. The standards listed here provide a snapshot of where there are differences between the Township's standards and the PUD standards, including for setbacks, height, and landscaping requirements.

ZONING COMPARISON TABLE		
	Existing Zoning Requirements	PUD Standards:
Commercial	Setbacks	
	Regional Commercial Side Yard: 20 feet	Side Yard: 20 feet for each side plus an additional 0.5 feet per foot of height over 45 feet tall
	Maximum Height	
	Regional Commercial: 45 feet or 3 stories	All other uses in commercial: 45 feet, 3 stories Hotel: 57 feet or 4 stories, whichever is less*
Industrial	Existing Zoning Requirements	
	Setbacks	
	Front Yard: 85 feet if parking is located in the front yard; 50 feet if no parking is located in the front yard Side Yard: 25 feet (or 50 feet if adjacent to residential)	Front Yard: 85 feet (50 feet if no parking is located in the front yard and/or building height is 30 feet or less) Side Yard: 25 feet (or 50 feet if adjacent to residential) & 25 plus an additional 0.5 feet per foot of height over 30 feet (if not adjacent to residential)
Maximum Height		
	30 feet or 2 stories	All other uses in industrial: 55 feet or 3 stories, whichever is less Hotel: 57 feet or 4 stories, whichever is less*
Landscaping	Existing Zoning Requirements	
	Frontage - Greenbelt along Latson Road	
	Minimum Width of Greenbelt: 20 feet with one canopy tree planted every 40 feet of frontage	Minimum width of Greenbelt: 30 feet with one canopy tree planted for every 40 feet of frontage
Frontage - Tree Sizes		
	Minimum Required Plant Sizes: Deciduous Canopy Tree: 2.5" caliper Deciduous Ornamental Tree: 2" caliper Evergreen Tree: 6' height Deciduous Shrub: 2' height Upright Evergreen Shrub: 2' height Spreading Evergreen Shrub: 18" - 24" spread	Minimum Required Plant Sizes (along Latson Road only): Deciduous Tree: 3-4 inch caliper (with minimum average size of 3.5 inches) Ornamental Tree: 2.5 - 3.5 inch caliper Evergreen Tree: 10 - 14 feet tall (with minimum average size of 12 feet tall) Shrubs and Hedges: 30-36 inches tall Canopy Tree: 2.5 inch caliper Deciduous Ornamental Tree: 2 inch caliper Evergreen Tree: 6 feet height Deciduous Shrub: 2 feet height Upright Evergreen Shrub: 2 feet height Spreading Evergreen Shrub: 18 inch - 24 inch spread
Other	Existing Zoning Requirements	
		See Design Guidelines for additional standards related to: Parking Lighting Architecture Signs (currently no off-premise signs are permitted, this PUD proposes some with specific guidelines)

*The Hotel may be increased to 65 feet or 5 stories, provided minimal distance from adjacent residential home is 500 feet and the Township determines the design is compatible with residential in the area in terms of views and lighting

HIGH TECH/LIGHT INDUSTRIAL DESIGN GUIDELINES

The primary purpose of the building design standards is to promote and enforce high-quality architectural design for building sides visible from Latson Road to enhance the Township's entryway from the I-96 interchange. The design and materials on building sides visible from the interior roads are not required to meet the more stringent standards but should still utilize some of these elements to promote an attractive appearance. Building along the "north edge" shall also meet the guidelines described on page 10.

A. Facade Plane and Material Delineation

- **Horizontal delineation.** Long lengths of building facade wall planes shall be broken up using different materials and offset of planes, to serve as a visual breakup of long exterior walls. The following criteria shall be applied to the horizontal plane of walls with a minimum building length of 100 feet:
 - » Buildings with frontages 100 feet to 500 feet in length
 - Require a major material change at a rate of 1.5 times the height of the building.
 - Require a shift in wall façade a minimum of 2 feet in dimension every 40 feet.
 - » Buildings with frontages over 500 feet in length
 - Require a major material change at a rate of 1.75 times the height of the building.
 - Require a shift in wall façade a minimum of 2 feet in dimension every 40 feet and a shift in wall façade a minimum of 4 feet in dimension every 80 feet.
 - If side and/or rear building walls face primary roadways, the same regulations as the guidelines apply to the secondary facades. If the building's side and/or rear walls face internal lots, rates for planar variation can double guidelines.
- **Vertical delineation.** To create visual interest and encourage an active street frontage, interruption in the vertical plane should be prevalent on tall buildings. Primary entrances and exits should be highlighted through planar variation and/or difference in height.
 - » Buildings up to 30 feet in height
 - Require a change in material color or texture in a minimum of 3 locations. Height of change is required to be a minimum of 5 feet.
 - Require a shift in wall façade or provide a visual break in wall façade at a minimum of two locations.
 - » Buildings over 30 feet in height
 - Require a change in material color or texture in a minimum of 5 locations. Height of change is required to be a minimum of 10 feet.

- Require a shift in wall façade or provide a visual break in wall façade (through canopies or accent bands/recesses) at a minimum of four locations.
- **Corner Articulation.** To ensure that building corners that face or can be viewed from public or private roads shall be distinctive in the use of architectural elements, materials, and design.
 - » The continuation of architectural elements that are required for horizontal and vertical material delineation shall also wrap the corners of the building extending at least 50 feet around the corner of the building.
 - » Corner articulation may be provided in the form of glass or other types transparent materials.

EXTERIOR BUILDING MATERIALS

- Exterior façade materials shall consist of high quality, durable products on any side visible from a public or private roads. Materials are not limited to the brick requirements that typically applies in the Township. Appropriate building materials includes combinations of: brick, flush metal/aluminum panels, concrete block, and pre-cast concrete.
- Varying patterns and textures shall be introduced to give the building smaller scale relationships of materials vs. monotonous and large surfaces without visual variations.
- Glass shall be used on primary facades to provide transparency.

SIGHTLINE REQUIREMENTS AND DOCK DOORS

- All mechanical installations and/or features shall be adequately screened from street view or view from nearby public space. The choice of screening shall complement or enhance the building's dominant color and overall character.
- Dock doors must be located in the side or rear yard and have appropriate buffers to minimize impacts from abutting residential and commercial uses. In order to limit uses with higher truck volumes, up to one truck dock door per 4,000 square feet is permitted for building footprints that are up to 100,000 square feet. One truck dock door per 8,000 square feet of building footprint is permitted over 100,000 square foot. These standards may be relaxed for sites within the interior for walls not visible from a public street or I-96. Dock doors shall be set back at least 50 feet from the lot line (or 75 feet from the lot line if adjacent to residential). Buffer Zone Type A is required for any dock doors located adjacent to residential, and Buffer Zone Type B is required for any dock doors located adjacent to commercial.
- Accessory uses that include outdoor storage (including for trucks and trailers and loading areas) shall indicate the location of such areas

on the site plan. These areas shall not be located in the front yard and shall be no larger than 40% of the total square footage of the building on site. Sites shall also not have outdoor storage visible from I-96. Outdoor storage must have appropriate buffering between adjacent residential and commercial areas; Buffer Zone Type A is required for any outdoor storage area located adjacent to residential, and Buffer Zone Type B is required for any outdoor storage area located adjacent to commercial.

HIGH TECH / LIGHT INDUSTRIAL DESIGN GUIDELINES

Examples of building that meet the Industrial Building Design Standards are shown on pages 5 and 6.

HIGH-TECH / LIGHT INDUSTRIAL DESIGN DIMENSIONAL STANDARDS	
<i>Minimum setbacks:</i>	
Front Yard	85 feet (or 50 feet if no parking is located in the front yard and/or building height is 30 feet or less) ¹
Side Yard	25 feet (or 50 feet if adjacent to residential) 25 feet plus an additional 0.5 feet per foot of height over 30 feet (if not adjacent to residential) ²
Rear Yard	40 feet (or 80 feet if adjacent to residential)
Parking Lot	20 feet front, 10 feet side and rear
Maximum Height	55 feet or 3 stories, whichever is less ³
Maximum Height of Hotel	57 feet or 4 stories ⁴

1 Proposed addition to front yard setback with lesser building height.
 2 Proposed standard to provide for a greater side yard set back for taller buildings.
 3 Existing maximum height in the Zoning Ordinance is 30 feet or 2 stories
 4 As a Special Land Use, the Hotel may be increased to 65 feet or 5 stories, provided minimal distance from adjacent residential home is 500 feet and the Township determines the design is compatible with residential in the area in terms of views and lighting.

MINIMUM PARKING REQUIREMENTS	
Light Industrial	1.5 spaces per 1,500 square feet of gross floor area or 1.2 spaces per employee at peak shift, whichever is greater; plus 1 for each corporate vehicle, with the ability to reduce the amount of parking required to "bank" an area for future parking, as permitted in the Township's Zoning Ordinance.

INDUSTRIAL BUSINESS PARK OUTDOOR LIGHTING STANDARDS

The purpose and intent of the Outdoor Lighting standards is to:

- Minimize light trespass onto adjacent properties
- Help eliminate artificial lighting that contributes to "sky glow" and disrupts the natural quality of the nighttime sky
- Provide a safe nighttime environment

Any future site plan within the PUD shall be required to submit an outdoor lighting plan to abide by the standards set forth in this section. The site plan shall contain a photometric layout for the exterior lighting which may subsequently be waived if there is no parking area present on the site. These standards generally apply throughout the PUD, but flexibility may be allowed when the development is not adjacent to residential areas, and for the commercial area.

The following outdoor lighting types shall be exempt from the provisions of this section:

- Emergency lighting
- Temporary lighting for performance areas, construction sites and community festivals.
- Seasonal and holiday lighting provided that the lighting does not create direct glare onto other properties or upon the public rights-of-way.

The following outdoor lighting types shall be prohibited:

- Floodlights or swivel luminaires designed to light a scene or object to a level greater than its surroundings unless aimed downward. No fixtures may be positioned at an angle to permit light to be emitted horizontally or above the horizontal plane.
- Unshielded lights that are more intense than 2,250 lumens or a 150 watt incandescent bulb.
- Search lights and any other device designed solely to light the night sky except those used by law enforcement authorities and civil authorities.
- Laser source light or any similar high intensity light when projected above the horizontal plane.
- Mercury vapor lights.
- Metal halide lights, unless used for outdoor sport facilities.
- Quartz lights.

Outdoor Lighting Design Standards – Internal to the Site:

- Direct or reflected outdoor lighting shall be designed and located to be confined to the site for which it is accessory. The maximum lighting levels at the property lines of any other property shall not exceed 0.2 footcandles.
- Lighting of building facades shall be from the top and directed downward with full cut-off shielding.
- The average lighting values for areas intended to be lit on commercial and industrial parcels shall not exceed 1.0 footcandles on average. The uniformity ratio (maximum to minimum) for all parking lots shall not exceed the current IESNA RP-20 uniformity ratio guideline. (Note: Current guideline is 15:1)
- Lighting fixtures for industrial properties shall meet the township maximum height of 30 feet and 10 footcandles with the following exceptions:
 1. The Township may permit maximum light levels of 12 footcandles on average (common with new LED lighting systems), designed to have no spillover onto adjacent properties and a maximum pole height of 35 feet to reduce the number of poles upon a finding that the result will provide more efficient lighting and aesthetics throughout the day.
 2. Provided that when lighting is adjacent to, and visible from, abutting residential properties, the maximum height of lighting poles shall be 20 feet unless the Township approves taller poles with a demonstration that it is an overall better lighting design in terms of aesthetics.
 3. Site lighting for non-residential uses shall not exceed 1.0 footcandles on average when a use is not open for business.

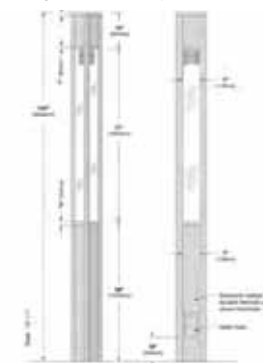
Outdoor Lighting Design Standards – Public Street Lighting:

- Streetlights in the public rights-of-way shall be the minimum necessary to provide adequate illumination for public safety and be designed to direct lighting downward onto the public rights-of-way.
- Luminaires installed up to the edge of any bordering property are permitted.
- Ornamental lighting will be installed as part of the northern entry features will be included (see bottom right for representative types of light fixtures). The fixtures will be selected during the design of the entry feature. The lighting could potentially also be installed along the Latson Road frontage along the right-of-way in the future as part of a corridor wide urban design project (see language in the PUD Agreement).
- Public street illumination shall use the most current American National Standard Practice for Roadway Lighting ANSI/IESNA RP-08 for all public street lighting.

HIGH TECH/LIGHT INDUSTRIAL OUTDOOR LIGHTING STANDARDS



12 ft "Triangular Column" by Selux



Recommended ornamental pedestrian-scale lighting for northern entry on Latson Rd.



Mando, Novi



BLM Group, Novi

HIGH TECH/LIGHT INDUSTRIAL
REPRESENTATIVE PHOTOGRAPHS THAT MEET INDUSTRIAL BUILDING DESIGN STANDARDS



Rapid Packaging, Grand Rapids



EPIC Equipment and Engineering, Shelby Parkway Corporate Park



AEV, Lyon Township



Kawasaki Robotics, Lyon Township



Martinrea International, Auburn Hills
*Image from Faudie Architecture



Harman International, Novi

HIGH TECH/LIGHT INDUSTRIAL
REPRESENTATIVE PHOTOGRAPHS THAT MEET INDUSTRIAL BUILDING DESIGN STANDARDS



SW Technology People



Visioneering, Auburn Hills



TI Automotive Headquarters, Auburn Hills



Magna

MIXED USE DESIGN GUIDELINES

A. Setbacks

- Design for development needs to ensure that building placement is generally oriented towards the street to encourage walkability and a pedestrian-friendly environment.

B. Parking and Access

- Development within such areas should occur within a planned, integrated commercial setting. Site design for parking areas and access points will promote safe and efficient circulation throughout the site.
- **Access roads shall be a minimum of 26 feet wide FOC and 30 ft inside turning radius (50 ft outside) for emergency vehicle access.**
- The access shall be aligned with the access drive for the industrial business park on the west side. The location shown may be shifted south to increase spacing from the rail crossing, at the site plan review phase with input from the Livingston County Road Commission.
- The amount of parking required for individual uses may be reduced to be efficient so that the peak parking demand is accommodated.
- Parking lots should be connected to promote shared parking and reduce the overall amount of impervious surface area.

Eliminate auto service from the mixed use.

Do we want to allow self-storage facilities?

Staff Comments

C. Pedestrian Amenities

- Uses shall be connected with an interior sidewalk system so that pedestrians can walk between the uses, and to the crossing at the intersection with Latson Road.

D. Landscaping

- Plant consistent and plentiful native vegetation to provide an attractive entry into the southern part of Genoa Township and provide generous interior landscape that serves as a buffer between the buildings and parking lots as well as adjacent land uses.
- Street trees planted shall consist of no more than 10% of a single species, no more than 20% of any genus, and no more than 30% of any tree family.
- Provide a 30 foot wide landscaped greenbelt along the Latson Road frontage. See page 22.

E. Architecture

- Commercial architecture design guidelines are described in detail on the following page.

F. Uses Permitted

- Uses allowed in the mixed use area could include offices, medical offices or clinics, urgent care, banks, retail, Research & Development, ~~automobile services, self-storage facilities,~~ and similar commercial uses.

OFFICE DESIGN GUIDELINES

OFFICE DIMENSIONAL STANDARDS	
<i>Minimum setbacks:</i>	
Front Yard	70 feet (or 35 feet if no parking is located in the front yard)
Side Yard	20 feet for each side
Rear Yard	40 feet
Parking Lot	20 feet front, 10 feet side and rear
Maximum Height	35 feet or 2.5 stories

MINIMUM PARKING REQUIREMENTS	
Business/professional offices	1 space per 300 square feet
Retail Stores	1 space per 250 square feet
Medical offices (dentist, doctors, or similar)	1 space per 200 square feet
Banks, credit unions, savings/loans	1 space for each 200 square feet of gross floor space, plus 2 spaces for each ATM. Drive-through windows shall be provided 4.0 spaces for the first window, plus 3.0 spaces for each additional window
Light industrial, manufacturing, testing labs, research and development centers	1.5 spaces per 1,000 sq. ft. gross floor area or 1.2 spaces per employee at peak whichever is greater; plus 1 space for each corporate vehicle.
Self-storage facility	Minimum of 6 spaces
Automobile service	2 spaces per each service bay, plus 1 space per employee, plus 1 space per each tow truck

Eliminate auto service from the mixed use.

Mixed use concepts illustrate potential uses and access configuration.



*Cumulative parking may be shared to reduce overall parking provided

This area backs to residential to the east and the south. There should be substantial landscape screening along the eastern and southern property lines.

COMMERCIAL DESIGN GUIDELINES

- A. Setbacks**
 - Design for development needs to ensure that building placement is generally oriented towards the street to encourage walkability and a pedestrian-friendly environment.
- B. Parking and Access**
 - Development within such areas should occur within a planned, integrated commercial setting. Site design for parking areas and access points will promote safe and efficient circulation throughout the site.
 - Access roads shall be a minimum of 26 feet wide FOC and 30 ft inside turning radius (50 ft outside) for emergency vehicle access.**
 - The access shall be positioned in an ideal location that respects standards for highway on-ramp and railroad setbacks. The location shown may be shifted north to increase spacing from the rail crossing, at the site plan review phase with input from the Livingston County Road Commission.
 - The amount of parking required for individual uses may be reduced to be efficient so that the peak parking demand is accommodated.
 - Parking lots should be connected to promote shared parking and reduce the overall amount of impervious surface area.

Require cross connections to adjacent site.

Show connections to property to the east.



Commercial concepts illustrate potential uses and access configuration.

- C. Pedestrian Amenities**
 - Uses shall be connected to an interior sidewalk system so that pedestrians can easily access the uses.
- D. Landscaping**
 - Plant consistent vegetation to provide an attractive entry into the site and provide a buffer between the buildings and parking lots as well as interior landscaping and uses.
 - Street trees plan species, no more than 10% of a single genus, and no more than 30% of any tree family.
 - Provide a 30 foot greenbelt along the highway on-ramp frontage.
- E. Architecture**
 - Commercial architecture design guidelines are described in detail on the following page.
- F. Uses Permitted**
 - Uses allowed in the mixed use area may include retail stores, restaurants, drive-through restaurants, gas stations, EV parking, hotels, and similar commercial uses.

Require cross connections to adjacent site.

Remove automotive service and self storage.



COMMERCIAL DESIGN GUIDELINES

COMMERCIAL DIMENSIONAL STANDARDS	
<i>Minimum setbacks:</i>	
Front Yard	70 feet (or 35 feet if no parking is located in the front yard)
Side Yard	20 feet for each side plus an additional 0.5 feet per foot of height over 45 feet tall ¹
Rear Yard	50 feet
Parking Lot	20 feet front, 10 feet side and rear
Maximum Height	45 feet or 3 stories
Maximum Height of Hotel	57 feet or 4 stories ²

¹ Proposed new standard to provide greater side setbacks for taller buildings.
² As a Special Land Use, the Hotel may be increased to 65 feet or 5 stories if the minimal distance from adjacent residential home is 500 feet and the design is compatible with residential in the area in terms of lighting.

MINIMUM PARKING REQUIREMENTS	
Retail Stores	1 space per 250 square feet
Gas Station	2 spaces per service bay, plus 2 spaces per employee, plus 1 space per tow truck space per 500 square feet designated for sale items
Hotel	1 space per guest room, plus 1 space per 100 square feet of lounge, restaurants, conference or banquet rooms
Self-storage facility	Minimum of 6 spaces
Automobile service	2 spaces per each service bay, plus 1 space per employee, plus 1 space per each tow truck
Medical offices (dentist, doctors, or similar)	1 space per 200 square feet

*Cumulative parking may be shared to reduce overall parking provided

Why are we only including parking standards for a few of the uses permitted? Are these deviations from our Zoning Ord?

Show connections to property to the east.

COMMERCIAL ARCHITECTURAL DESIGN GUIDELINES

The following guidelines apply to all commercial types within the Innovation Exchange PUD to promote and enforce high-quality architectural design for building sides, including gas stations (see precedent photo), visible from a road or parking lot. Retail uses are anticipated to be predominantly 1 to 2 story flat roofed buildings.

A. General Design Theme.

- These architectural requirements are generally intended to provide consistent architectural quality among buildings and other improvements within the Latson Road corridor and Innovation Exchange.
- These guidelines are intended to generate architectural cohesion, however some architectural variation is allowed that is consistent with the overall design theme.
- All structures shall be thoughtfully designed in a manner that visually and functionally complements the existing context.

B. Building Elevations.

- If more than one story, a different architectural treatment may be employed on the ground floor facade than on the upper floors to enhance the experience of visitors/patrons.
- All building facades shall have a defined base or foundation, a middle or modulated wall, and a top formed by a pitched roof or three-dimensional cornice.
- Excluding windows, doorways, and associated decorative trim, 75% of the total area (square feet) of the front facade of commercial buildings, excluding hotels, shall be brick. This also includes facades visible from Latson Road and the site parking lots.
- Excluding windows, doorways, and associated decorative trim, 50% of the total area (square feet) of the side facades of commercial buildings, excluding hotels, shall be brick. This also includes facades visible from Latson Road and the site parking lots.
- Hotel building materials will be similar to the existing hotel in Genoa Township on the north side of the Latson Road interchange as well as other newer hotels along I-96 (see example precedent photo).
- The following items are prohibited: Texture 1-11, aluminum siding or asbestos or asphalt shingles shall not be used on the exterior walls.
- Building facades, which are ninety (90) feet or greater in length, shall be designed with offsets (projecting or recessed) at intervals of not greater than sixty (60) feet.
- Offsets may be met with setbacks of the Building Facade and/or with architectural elements (i.e. arcades, columns, piers, and pilasters), if such architectural elements meet the minimum offset requirements of this requirement.

C. Roofs.

1. Pitched Roofs:
 - Shall be simply and symmetrically pitched and only in the configuration of gables and hips, with pitches ranging from 4:12 to 14:12.
 - If standing seam panels are used then they shall be: 1) gray, black, dark blue, dark green, barn red or dark brown; and 2) made of a non-reflective material.
 - Modulation of the roofs and/or roof lines shall be required in order to eliminate the appearance of box-shaped buildings.
2. Flat Roofs
 - Flat roofs are permitted if edged by a parapet wall on the front and side facades with an articulated, three dimensional cornice.
 - Parapet walls shall be fully integrated into the architectural design of the building to create seamless design transitions between the main building mass and roof-mounted architectural elements (which may include screening elements for roof-mounted equipment).

D. Lighting and Signs

1. Site Lighting
 - Site lighting, within the commercial area, shall be LED based, consistent in style, color, and design and in accordance with the Township Zoning Ordinance standards.
 - All site lighting fixtures shall have a maximum height of twenty (20) feet. The maximum light levels on these properties shall not exceed 10 footcandles on average (common with new LED lighting systems), except the fueling area for a gas station is allowed an average of 12.4 foot candles. Lighting will otherwise be in accordance with the Township Zoning Ordinance lighting standards.
 - With the exception of low intensity architectural lighting, exterior wall mounted lights and pole mounted lights shall incorporate overhead cutoffs or fixtures that direct the light downward.
2. Retail signs and other signs shall conform with the Township Ordinances.



Building Design Precedents demonstrating the design guidelines.

COMMERCIAL DESIGN GUIDELINES BUILDING DESIGN PRECEDENTS



Example of a gas station adhering to greater design standards.



Newer hotels along the I-96 corridor that demonstrate higher quality building design.



RESIDENTIAL DEVELOPMENT

Phase 2 includes multiple MFUs are intended to expand Master Plan goals. This high technology uses and other senior independent living or subsequent purchaser guidelines to design professional site plans. Specific compliance plan that will be submitted.

In general these guidelines

1. A description of architectural similar development consistent with the Township's standards.
2. Provision of Missing Middle Housing, including apartments.
3. An overall open space including pedestrian paths as woodlots and wetlands.
4. Provision for three main project entry signs, one on Latson Road, one on Crooked Lake Road, and at the transition in between non-residential uses to the North. These signs will be further specified by the Developer.

Expand upon phasing. Include triggers for when the residential development can occur. See 10.03.06(i) for guidance.

Expand upon phasing. Include triggers for when the residential development can occur. See 10.03.06(i) for guidance.

MULTI-FAMILY ARCHITECTURAL DESIGN GUIDELINES

The following guidelines apply to all multifamily types within the Innovation Exchange PUD to promote and enforce high-quality architectural design for building sides.

A. General Design Theme.

- These architectural requirements are intended to provide consistent architectural quality among buildings and other improvements within the Latson Road and Crooked Lake Road corridors.
- These guidelines are intended to generate architectural cohesion, however some variation is allowed that is consistent with the overall theme.
- All structures shall be thoughtfully designed in a manner that visually and functionally complements the existing context.

B. Building Elevations.

- If more than one story, a different architectural treatment may be employed on the ground floor facade than on the upper floors to enhance the experience of visitors/patrons.
- All building facades shall have a defined base or foundation, a middle or modulated wall, and a top formed by a pitched roof or three-dimensional cornice.
- Excluding windows, doorways, and associated decorative trim, 75% of the total area (square feet) of the front facade of multifamily buildings, shall be brick, face brick, or stone. This also includes facades visible from Latson Road, Crooked Lake Road, and the private drives.
- Excluding windows, doorways, and associated decorative trim, 50% of the total area (square feet) of the side facades of multifamily buildings, shall be brick, face brick, or stone. This also includes facades visible from Latson Road, Crooked Lake Road, and the private drives.
- The following items are prohibited: Texture 1-11, aluminum siding or asbestos or asphalt shingles shall not be used on the exterior walls.
- Building facades, which are forty-five (45) feet or greater in length, shall be designed with offsets (projecting or recessed) at intervals of not greater than thirty (30) feet.
- Offsets may be met with setbacks of the Building Facade and/or with architectural elements (i.e. arcades, columns, piers, and pilasters), if such architectural elements meet the minimum offset requirements of this requirement.

C. Multifamily residential types

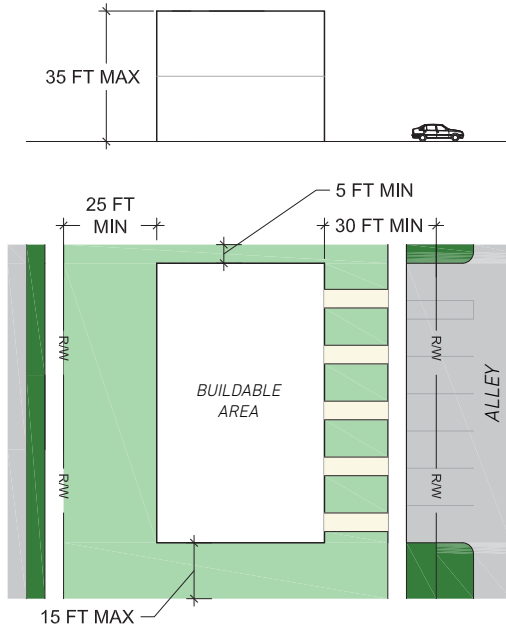
- Missing Middle Housing: as desired by the Township, this type of housing provides an alternative to single-family homes, allowing for a more efficient use of land and resources. It can take several forms, but the following are considered appropriate for the site:
 - > Townhomes, side-by-side, attached, 2 story maximum
 - > Fourplex stacked, 2.5 story maximum
- Apartments, 3 story maximum
- Senior housing, single-story, semi-detached

D. Parking and Access

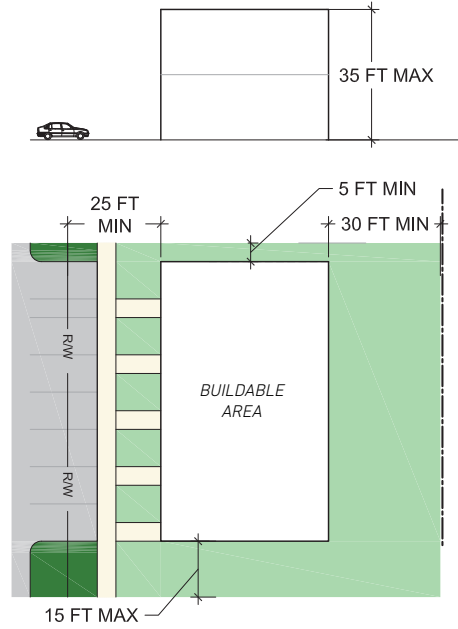
- Parking requirements vary per residential use type.
- Site design for parking areas and access points will promote safe and efficient circulation throughout the site.
- Access roads shall be a minimum of 26 feet wide FOC and 30 ft inside turning radius (50 ft outside) for emergency vehicle access.

Add something to prevent repetitive design copy cat type housing developments.

TOWNHOME :
REAR-LOADED WITH SURFACE PARKING



TOWNHOME :
FRONT-LOADED WITH SURFACE PARKING



MULTI-FAMILY DESIGN GUIDELINES BUILDING DESIGN PRECEDENTS

ATTACHED TOWNHOME REGULATIONS	
Minimum Lot Area	10,000 sq. ft.
Minimum lot width at Sidewalk	70 ft.
Minimum Front Yard Setback	25 ft.
Minimum Side Yard Setback	5-15 ft. on each side (totaling 20 ft)
Minimum Rear Yard Setback	30 ft.
Maximum Building Height (Stories)	2
Maximum Building Height	35 ft.
Minimum Floor Area without Basement	900 sq. ft.
Maximum Number of Units Per Building	5 per acre

ADDITIONAL ARCHITECTURAL REQUIREMENTS - ATTACHED TOWNHOMES

Attached townhomes are side-by-side attached units (not stacked) and will include front and rear doors, attached garages or adjacent parking, and outdoor living space. Each townhome building will consist of maximum 5 total units, according to Township standards. Refer to general residential architectural and landscape design requirements for additional requirements.

A. Parking facilities

- Parking facilities can consist of surface parking, garages, or carports.
- Enclosed garages may be attached or adjacent to the unit. Detached covered carports shall also be permitted.
- Garages on Townhomes shall be front or rear entry.

B. Parking spaces

- Includes .25 spaces, rounded up, designated for visitor parking that will be allocated throughout the phase.

These images don't match the requirement for 75% brick in the preceding page.



2-story townhomes



2-story townhomes with garages

TOWNHOMES
REPRESENTATIVE PHOTOGRAPHS THAT MEET RESIDENTIAL DESIGN STANDARDS



Two story Townhomes



2-story walk-up townhomes



2-story walkup townhomes



Two story Townhomes



2-story walkup townhomes



Townhomes with front-facing garages

These images don't match

Design guidelines require brick. Do you have examples of brick fourplex units?

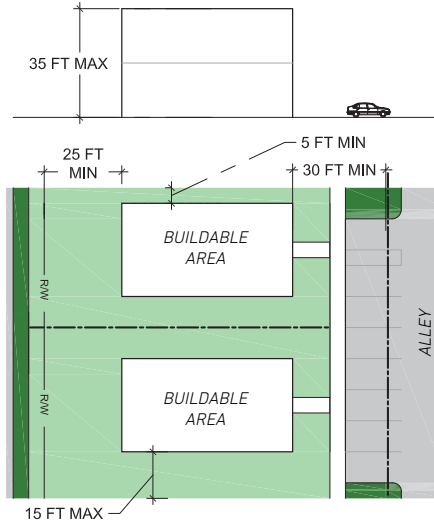


Fourplex stacked with rear parking

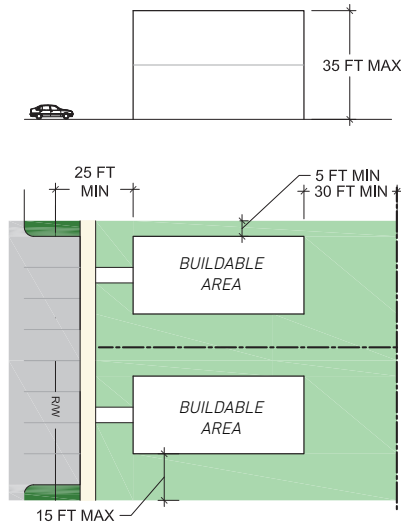


Fourplex stacked concept with front-loaded parking

FOURPLEX STACKED :
REAR-LOADED WITH SURFACE PARKING



FOURPLEX STACKED :
FRONT-LOADED WITH SURFACE PARKING



Staff
Comments

**MULTI-FAMILY DESIGN GUIDELINES
BUILDING DESIGN PRECEDENTS**

FOURPLEX STACKED REGULATIONS	
Minimum Lot Area	10,000 sq
Minimum lot width at Sidewalk	70 ft.
Minimum Front Yard Setback	25 ft.
Minimum Side Yard Setback	5-15 ft. on each side (totaling 20 ft.)
Minimum Rear Yard Setback	30 ft.
Maximum Building Height (Stories)	2
Maximum Building Height	35 ft.
Minimum Floor Area without Basement	900 sq. ft.
Minimum Building Separation	N/A
Maximum Number of Units Per Building	5 per acre

**ADDITIONAL ARCHITECTURAL REQUIREMENTS -
FOURPLEX STACKED**

Fourplex stacked flats are detached with four dwelling units and will include front and rear doors, attached garage, adjacent parking, and outdoor living space. Each fourplex building will consist of maximum 4 total units. Refer to general residential architectural and landscape design requirements for additional requirements.

A. Parking facilities

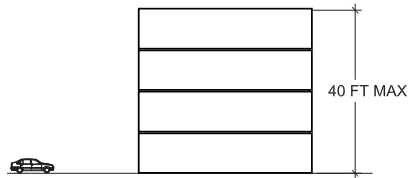
- Parking facilities can consist of surface parking, garages, and carports.
- Enclosed garages shall be attached or adjacent to the unit. Detached covered carports shall also be permitted.
- Garages on Townhomes shall be front or rear entry.

B. Parking spaces

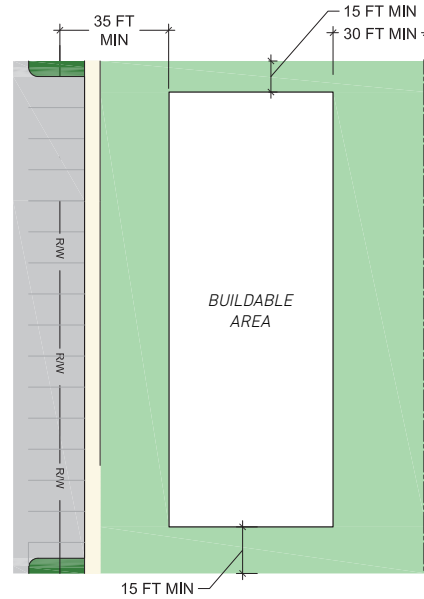
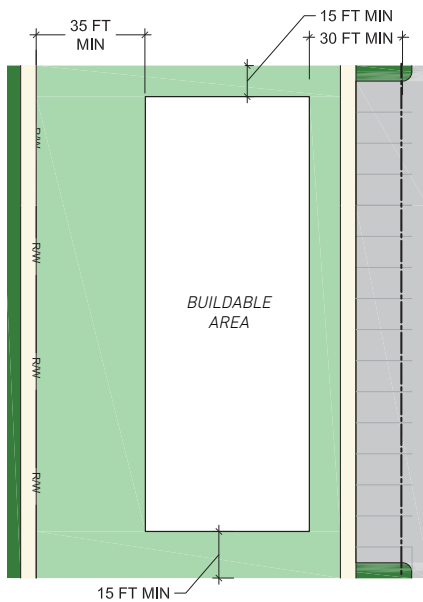
- Includes .25 spaces, rounded up, designated for visitor parking that will be allocated throughout the phase/pod.

Design guidelines require brick. Do you have examples of brick fourplex units?

APARTMENTS :
REAR-LOADED WITH SURFACE PARKING



APARTMENTS :
FRONT-LOADED WITH SURFACE PARKING



Preliminary conceptual elevations



MULTI-FAMILY DESIGN GUIDELINES BUILDING DESIGN PRECEDENTS

APARTMENT REGULATIONS

Minimum Lot Area	21,780 sq. ft.
Minimum lot width at Sidewalk	165 ft.
Minimum Front Yard Setback	35 ft.
Minimum Side Yard Setback	15 ft. min on each side (totaling 30 ft)
Minimum Rear Yard Setback	30 ft.
Maximum Building Height (Stories)	4
Maximum Building Height	40 ft.
Maximum Number of Units Per Building	8 per acre

ADDITIONAL ARCHITECTURAL REQUIREMENTS - APARTMENTS

Apartments are attached units and will include front and rear doors, attached garages or adjacent parking, and outdoor living space. Each apartment building will consist of maximum 8 total units. Refer to general residential architectural and landscape design requirements for additional requirements.

A. Parking facilities

- Parking facilities can consist of surface parking, garages, or carports.
- Enclosed garages shall be attached or adjacent to the unit. Detached covered carports shall also be permitted.
- Garages on Townhomes shall be front or rear entry.

B. Parking spaces

- Includes .25 spaces, rounded up, designated for visitor parking that will be allocated throughout the phase/pod.



Stacked flats with front-loaded parking



Stacked flats with rear-loaded parking

STACKED FLATS
REPRESENTATIVE PHOTOGRAPHS THAT MEET BUILDING DESIGN STANDARDS



Stacked flats with front-loaded parking



Stacked flats with rear open space



Stacked flats with front loaded parking with first story walk-ups



Stacked flats with front-loaded parking



Stacked flats with internal circulation and front loaded parking



Stacked walk-up flats with rear-loaded parking

SINGLE-FAMILY ARCHITECTURAL DESIGN GUIDELINES

The following guidelines apply to all single-family types within the Innovation Exchange PUD to promote and enforce high-quality architectural design for building sides.

A. General Design Theme.

- These architectural requirements are generally intended to provide consistent architectural quality among buildings and other improvements within the Latson Road corridor and Innovation Exchange.
- These guidelines are intended to generate architectural cohesion, however some architectural variation is allowed that is consistent with the overall design theme.
- All structures shall be thoughtfully designed in a manner that visually and functionally complements the existing context.

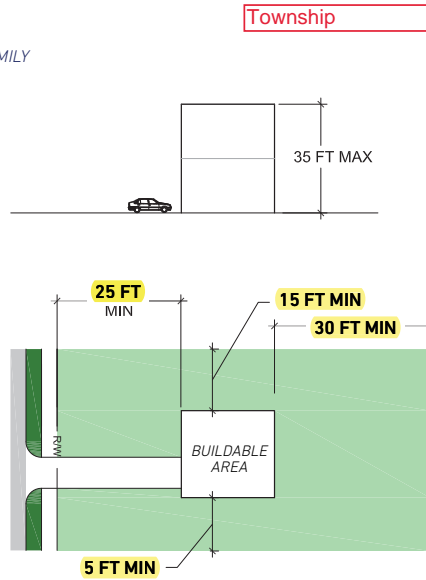
B. Building Elevations.

- Exterior building colors are to follow a historic and natural color palette. Subdued blues, greens, tans, gray and white are encouraged. Very bright colors are not permitted.
- Permitted building materials include brick, stone, wood or simulated wood, and vinyl siding. A combination of brick/ stone and siding must be used. Exposed block or concrete foundations are not permitted on all street and side facing facades and must be finished with permitted building materials.
- Garage doors shall be either panelized wood, panelized steel or panelized aluminum.
- Building facades, which are forty-five (45) feet or greater in length, shall be designed with offsets (projecting or recessed) at intervals of not greater than thirty (30) feet.
- Offsets may be met with setbacks of the Building Facade and/or with architectural elements (i.e. arcades, columns, piers, and pilasters), if such architectural elements meet the minimum offset requirements of this requirement.
- All elevations: Excluding windows, doorways, and associated decorative trim, 50% of the total area (square feet) of the front facade shall be brick or stone.

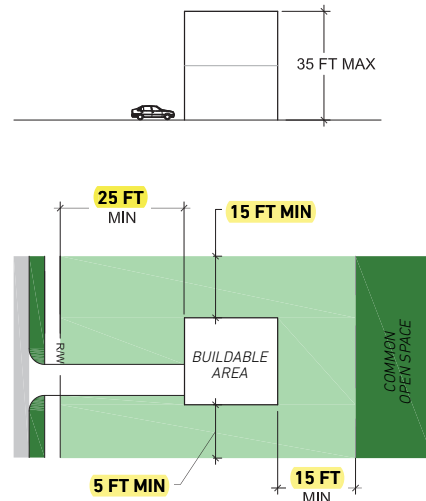
C. Garages

- Vehicle garages must be attached.
- Garages on single family units shall be front, side, or courtyard entry with a maximum of a three car garage.
- Garages may not extend more than 10 ft beyond the extents of living space.
- No other accessory building or structure may be erected without the prior written consent of the developer.

SINGLE FAMILY



SINGLE FAMILY ABUTTING OPEN SPACE



Township

SINGLE FAMILY DESIGN GUIDELINES BUILDING DESIGN PRECEDENTS

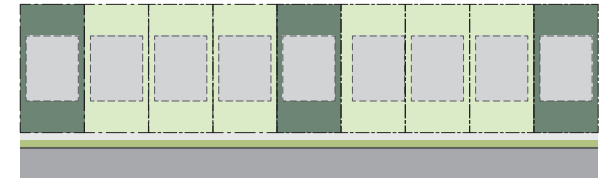
SINGLE FAMILY REGULATIONS

Minimum Lot Area	10,000 sq. ft.
Minimum lot width at Sidewalk ¹	70-75 ft.
Minimum Front Yard Setback	25 ft.
Minimum Side Yard Setback	5 ft. min on each side (totaling 20 ft)
Minimum Rear Yard Setback	30 ft.
Minimum Floor Area without Basement	900 sq. ft.
Maximum Building Height (Stories)	2
Maximum Building Height	35 ft.

¹ The minimum lot width will be 75 ft consistent with the Medium Density Residential (MDR) District, provided that the Developer and Township may agree upon a 70 ft width if additional open space is provided in the development.

D. Variation in Front Elevations.

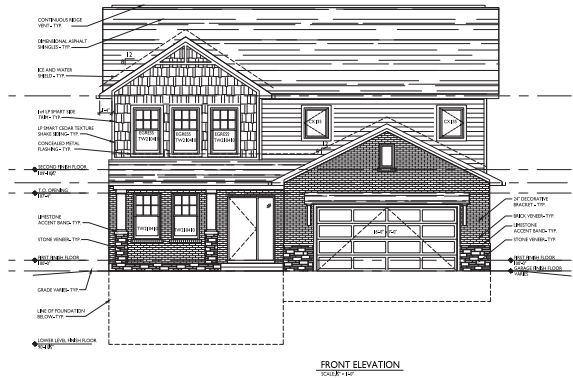
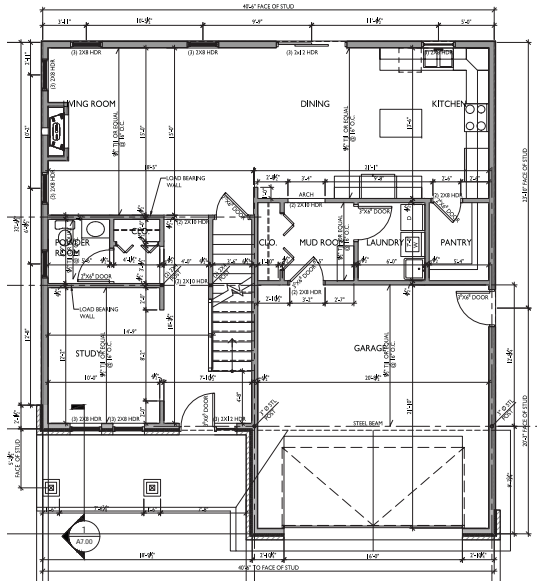
- No substantially similar front elevation (in both style and color) of any Unit shall be duplicated within three on either side, unless approved by the Developer. Different colors, building material patterns, offsets, roof lines, porches, windows, doors, and ornamental trim shall be used for Units on adjacent Units to avoid the appearance of repetition.



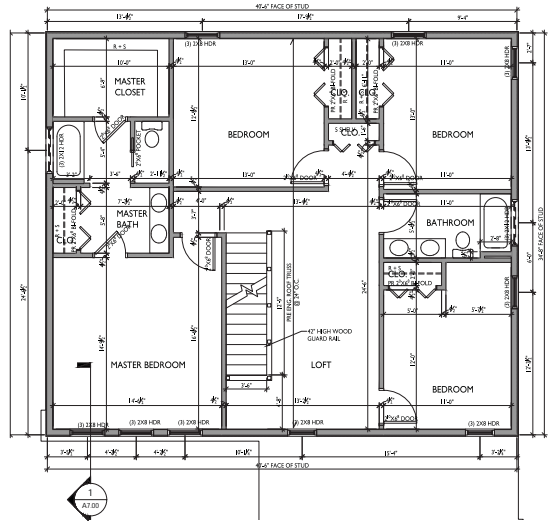
Front Elevation Repetition Spacing

E. Rear Yard Setback

- Setback distance is reduced to 15' where the entire rear lot line abuts a common open space.



Conceptual imagery and elevations of two-story home



Sample floor plan of single family home



Single family ranch home concept

SINGLE FAMILY
REPRESENTATIVE PHOTOGRAPHS THAT MEET BUILDING DESIGN STANDARDS



Single family ranch home



Example floor plan



3-story stacked units with shared open space



3-story stacked with drop off



2-unit, 1 story, semi-detached units with garages



2.5-story attached special care facility



Multi-unit, 1 story, semi-detached units with garages and shared open space.

SENIOR HOUSING DESIGN GUIDELINES BUILDING DESIGN PRECEDENTS

SINGLE FAMILY REGULATIONS

Minimum Lot Area	21,780 sq. ft.
Minimum lot width at Sidewalk	100 ft.
Minimum Front Yard Setback	40 ft.
Minimum Side Yard Setback	20 ft. min on each side (totaling 40 ft)
Minimum Rear Yard Setback	50 ft.
Minimum Floor Area without Basement	980 sq. ft.
Maximum Building Height (Stories)	2
Maximum Building Height	35 ft.

ADDITIONAL ARCHITECTURAL REQUIREMENTS - SENIOR HOUSING

Senior housing may be attached or semi-detached units and will include front and rear doors, attached garages or adjacent parking, and outdoor living space. Refer to general residential architectural and landscape design requirements for additional requirements.

A. Parking facilities

- Parking facilities can consist of surface parking, garages, or carports.
- Enclosed garages shall be attached or adjacent to the unit. Garages may not protrude more than 10 ft beyond the living space.

B. Parking spaces

- Includes .25 spaces, rounded up, designated for visitor parking that will be allocated throughout the phase/pod.



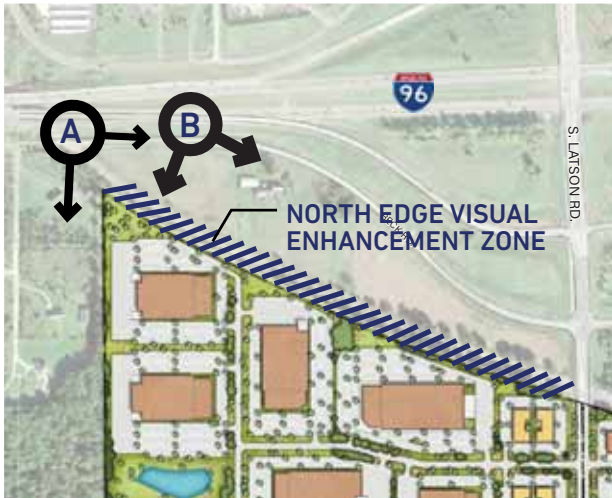
2-unit, 1 story, semi-detached units with garages

NORTH EDGE VISUAL ENHANCEMENT ZONE DESIGN GUIDELINES

The following guidelines apply to the North edge. The intent is to provide "front door" type views for building facades and areas that can be seen from traffic along I-96 or Beck Road. The area where this additional design requirement may apply is illustrated on the sight line study (right). As site plans are submitted, the Township will consider the size of the building, its height, setbacks, presence of loading docks, parking, and other activities. Those factors will be used to determine the extent that the following may be necessary to meet the intent:

EXTERIOR BUILDING MATERIALS AND LAYOUT

- Exterior building walls visible from I-96 or Beck Road shall be similar to building materials used on the front facade, and/or additional landscape will be provided to screen views, or fill in gaps in views.
- Dock doors shall be located on the building walls that are not directly visible or shall be screened with landscaping along the site boundary.
- Buffers and landscaping may be reduced or modified in consideration of the distance from the interchange or if woodlands are preserved to achieve the intent of these guidelines.



SIGHT LINE STUDY



EXISTING CONDITIONS



SIMULATED VIEW



EXISTING CONDITIONS



SIMULATED VIEW

ACCESS

Two access points are proposed along Latson Road. The northern access will align with the accessory commercial on the east side. It is anticipated that this access will be signalized as recommended in the traffic impact study. This location may be shifted slightly south during the final design phase, to increase spacing from the railroad crossing, pending a review by the Livingston County Road Commission when construction is proposed. Provisions for improvements are described in the PUD Agreement.

The southern access is shown as offset with the current Sweet Road on the east side of Latson Road (see sketch). This alignment may be modified to more closely align with Sweet Road, if approved by the Township and the Livingston County Road Commission (see overall concept).

The southwest residential parcel may have roadway connections to the east and west. The Township and Developer shall agree on the location of the potential locations based on cooperation with adjacent property owners at the time of site plan approval.

TRAFFIC SIGNALS

- Two traffic signals are proposed, one at both the north and south entrances with appropriate improvements. These may initially be installed with flashing phases until the traffic counts meet the level for activation required by the Road Commission.

LATSON ROAD FRONTAGE STREETScape GUIDELINES

- Generally a 30-foot landscaped greenbelt (see illustrations labeled "Option 1" and "Option 2") shall be installed along the east and west sides of Latson Road.
- Larger trees than the minimum sizes typically required:
 - » Deciduous Tree: 3-4 inch caliper (with minimum average size of 3.5 inches)
 - » Ornamental Tree: 2.5 - 3.5 inch caliper
 - » Evergreen Tree: 10 - 14 feet tall (with minimum average size of 12 feet tall)
 - » Shrubs and Hedges: 30-36 inches tall
 - » Canopy Tree: 3 inch caliper
 - » Deciduous Ornamental Tree: 2 inch caliper
 - » Evergreen Tree: 6 foot height
 - » Deciduous Shrub: 2 foot height
 - » Upright Evergreen Shrub: 2 foot height
 - » Spreading Evergreen Shrub: 18" - 24" spread

REQUIRED GREENBELT ALONG STREET FRONTAGE

For all other public roads outside of Latson Road, a twenty (20) foot wide greenbelt shall be planted along each public street right-of-way including the equivalent of one (1) canopy tree, rounded upward, for every fifty (50) linear feet of frontage. The Planning Commission may approve clustering of trees or substitution of evergreen trees for up to fifty percent (50%) of the required trees. All greenbelt trees shall be arranged to simulate a natural setting such as staggered rows or massings.

Sweet Road offset alignment concept



LATSON ROAD STREETScape AND LANDSCAPE GUIDELINES

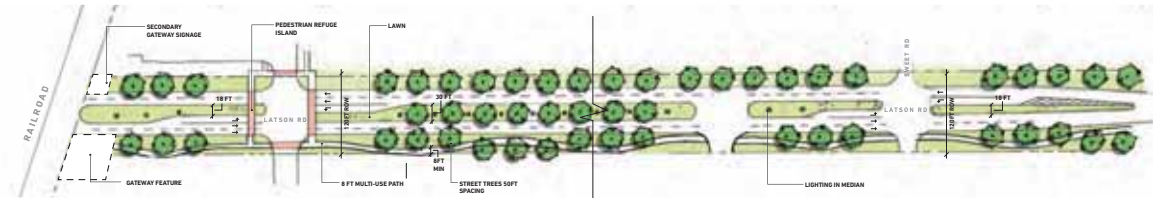
OVERALL MINIMUM STREETScape SIZES

- Outside of the Latson Road Greenbelt, the minimum required plant sizes shall be as follows:
 - Deciduous Canopy Tree: 2.5" caliper
 - Deciduous Ornamental Tree: 2" caliper
 - Evergreen Tree: 6' height
 - Deciduous Shrub: 2' height
 - Upright Evergreen Shrub: 2' height
 - Spreading Evergreen Shrub: 18" - 24" spread

LATSON ROAD LANDSCAPING AND IMPROVEMENTS

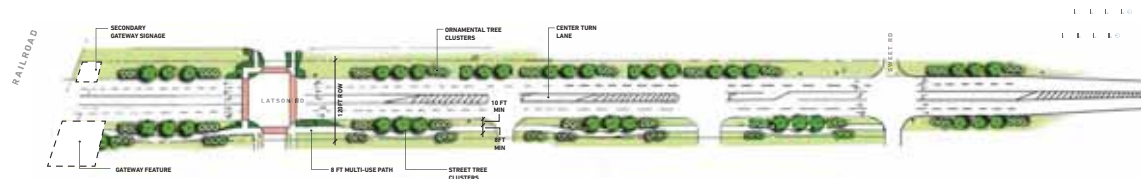
Two options for landscape design along Latson Road are shown below. The level of road improvements anticipated is described in the separate Traffic Impact Study. Versa only controls part of the Latson Road frontage shown, therefore, coordination will be needed between the County, Township, and other property owners. Right-of-way to accommodate future improvements to Latson Road is provided. See details in the PUD Agreement.

OPTION 1



This option shows a potential median along Latson road, which would need to be endorsed by the Livingston County Road Commission. This PUD reserves sufficient right-of-way to accommodate this alternative along the frontage owned by Versa.

OPTION 2



Option 2 shifts much of the median landscaping, illustrated in Option 1, to the greenbelt along each side of Latson Road.

PARKING LOT LANDSCAPING

- **Required Parking Area Landscaping** shall be in accordance with Section 12.02.04 Required Parking Area Landscaping of the Genoa Township Zoning Ordinance.
- Off-street parking areas containing ten (10) or more parking spaces shall be provided with landscaping in accordance with the following table. A minimum of one-third (1/3) of the trees shall be placed on the interior parking area and the remaining may be placed surrounding the parking lot within 18 feet.

MINIMUM TREES IN THE PARKING AREA	
10 - 100 spaces:	1 Canopy tree and 100 sq. ft. of landscaped area per 10 spaces.
101 - 200 spaces:	1 Canopy tree and 100 sq. ft. of landscaped area per 12 spaces.
201 spaces or more:	1 Canopy tree and 100 sq. ft. of landscaped area per 15 spaces.

BUFFER ZONE LANDSCAPING

- Buffer Yard Standards shall be in accordance with Tables 12.02.03 A and B "Buffer Zone Requirements" and "Description of Required Buffer Zones" as required by the Genoa Township Zoning Ordinance.
- Buffers and landscaping may be reduced or waived if woodlands are preserved to achieve the intent.

Commercial Buffer Yard Requirements:

- For commercial uses adjacent to residential uses:
 - Minimum width: 20 feet
 - 6 foot high continuous wall or 3 foot high berm
 - 1 canopy tree, 1 evergreen tree and 4 shrubs per each thirty (30) linear feet along the property line, rounded upward
- For commercial uses adjacent to other commercial uses:
 - Minimum width: 10 feet
 - 1 canopy or evergreen tree or 4 shrubs per each twenty (20) linear feet along the property line, rounded upward

Buffering Between Industrial and Residential or Commercial Uses.

- For industrial uses adjacent to residential uses:
 - Minimum width: 50 feet
 - 6 foot high continuous wall or 4 foot high berm
 - 1 canopy tree, 2 evergreen trees and 4 shrubs per each twenty (20) linear feet along the property line, rounded upward
- For industrial uses adjacent to commercial uses:
 - Minimum width: 20 feet
 - 6 foot high continuous wall or 3 foot high berm
 - 1 canopy tree, 1 evergreen tree and 4 shrubs per each thirty (30) linear feet along the property line, rounded upward

Notes:

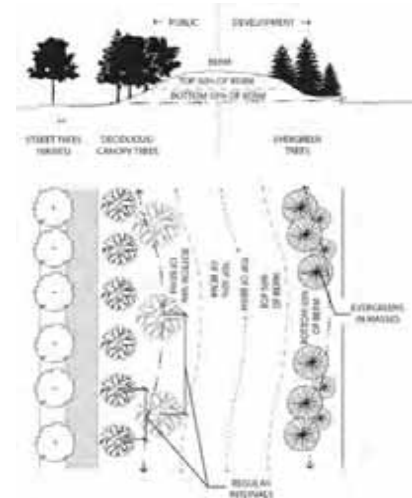
- Existing quality trees (hickory, oak, maple) with a caliper of at least eight (8) inches shall count as two (2) trees toward the buffer requirements.
- Canopy trees shall have a minimum caliper of 2.5 inches at the time of planting.
- Evergreens shall have a minimum height of six (6) feet at the time of planting.
- At least 50% of the shrubs shall be 24 inches tall at planting, with the remainder over 18 inches.

BUFFER ZONE REQUIREMENTS			
<i>Adjacent District for Use</i>			
Proposed Use	SF	MF or MHP	Commercial
Commercial/Office	C	C	C
Industrial	A/B	A/B	B/C

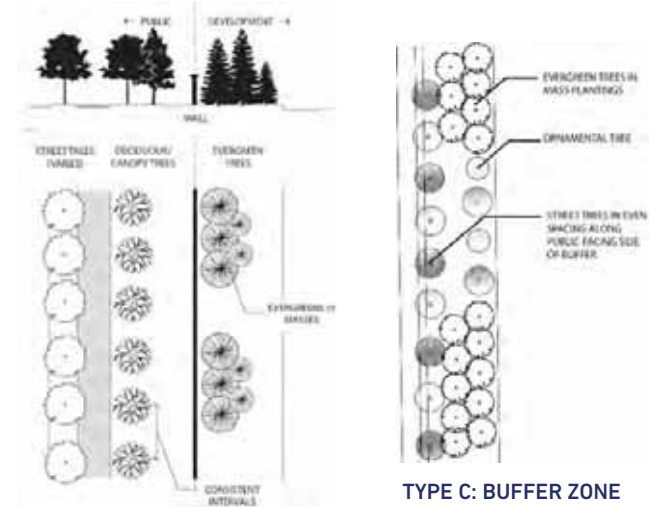
WETLANDS

- An undisturbed natural setback shall be maintained twenty-five (25) feet from a MDEQ determined/regulated wetland. Trails and recreational areas may be allowed in the wetland setback.

DESIGN GUIDELINES BUFFER ZONES



TYPE A: BUFFER ZONE WITH BERM



TYPE B: BUFFER ZONE WITH WALL

TYPE C: BUFFER ZONE BETWEEN STREET AND BUILDING

RESIDENTIAL LANDSCAPE DESIGN GUIDELINES

Proper landscape design, installation and maintenance is very important in creating an enjoyable, beautiful environment. Natural landscaping and trees shall be left in their natural state to the extent practical.

A. Planting Materials

- Planting materials are to be of a high quality and substantial size to provide a degree of maturity to the appearance of the landscaping immediately upon installation.

B. Lawn Areas.

- All areas of a Unit not landscaped with plant materials or hard surfaces or kept as natural wooded areas shall be established as lawn areas by sodding or seeding. Preservation of wooded rear yard areas in their natural condition is strongly encouraged.

C. Edging and Mulching Materials.

- The use of natural cut sod edging to define planting beds is strongly encouraged. Edging materials made of steel, aluminum or plastic may be used to define planting beds.

D. Berms and Boulders.

- The creation of landscaped berms, boulder outcroppings, raised beds and other creative landscape design is strongly encouraged.

E. Irrigation.

- Installation of an underground sprinkler system of each Unit is strongly encouraged.

F. Landscape Screening.

- All exterior air conditioning equipment, utility meters and utility boxes must be screened from view from the road and adjacent Units. The front exterior foundation of each Unit shall be screened by landscape plantings so as to minimize its visibility from the road.



Utilities screened by shrub plantings

G. Retaining Walls.

- All retaining walls shall be of natural stone. Wooden tie, block and unilock type walls are permitted with prior written consent of the Developer.

H. Landscape Lighting.

- Subdued lighting which highlights landscaping features and architectural elements is strongly encouraged. Lighting shall be unobtrusive with careful attention given to both high quality lighting fixtures and the effects of the lighting itself.

I. Completion of Landscaping.

- Installation of landscaping after completion of exterior is required, weather permitting. In all events, landscape installation shall be completed, meaning finish graded and suitably planted, within two hundred forty (240) days after the exterior of the Unit has been substantially completed. Decks and patios must be completed at the same time as completion of landscaping.

PARKING LOTS

- Required Parking Area Landscaping** shall be in accordance with Section 12.02.04 Required Parking Area Landscaping of the Genoa Township Zoning Ordinance.
- Off-street parking areas containing ten (10) or more parking spaces shall be provided with landscaping in accordance with the following table. A minimum of one-third (1/3) of the trees shall be placed on the interior parking area and the remaining may be placed surrounding the parking lot within 18 feet.

MINIMUM TREES IN THE PARKING AREA	
10 - 100 spaces:	1 Canopy tree and 100 sq. ft. of landscaped area per 10 spaces.
101 - 200 spaces:	1 Canopy tree and 100 sq. ft. of landscaped area per 12 spaces.
201 spaces or more:	1 Canopy tree and 100 sq. ft of landscaped area per 15 spaces.

BUFFER ZONES

- Perimeter buffer landscape along Crooked Lake Road and Latson Road frontage. (see Type A or C buffer zones on previous page)

WETLANDS

- An undisturbed natural setback shall be maintained twenty-five (25) feet from a MDEQ determined/regulated wetland. Trails and recreational areas may be allowed in the wetland setback.

RESIDENTIAL DESIGN GUIDELINES

GENERAL, PARKING LOTS, BUFFER ZONES, DRIVES, AND DETENTION PONDS

PRIVATE DRIVES

- Provide generous interior landscape that serves as a buffer between the buildings and parking lots as well as adjacent land uses.
- Street trees planted along a private drive shall consist of no more than 10% of a single species, no more than 20% of any genus, and no more than 30% of any tree family.
- The maximum spacing between trees shall be 45 feet for large trees, 35 feet for medium trees, and 25 feet for small trees. See definitions below:
 - LARGE TREE.** Any tree species which normally attains a full-grown height equal to or greater than 50 feet.
 - MEDIUM TREE.** Any tree species which normally attains a full-grown height of between 30 and 50 feet.
 - SMALL TREE.** Tree species which normally attains a full-grown height of under 30 feet.
- The tree location shall be at least 20 feet from street intersections and ten feet from fire hydrants or utility poles.

DETENTION PONDS

- Any visible detention areas from roadways, parking lots, residential dwellings, primary entrances to buildings or predominant views shall have a maximum 6:1 slope and natural appearance, such as variable shape, natural arrangement of landscape materials, aerated by fountains, and use of boulder accent walls or other similar design features.



Example detention pond with fountains

OPEN SPACE CONCEPT AND REPRESENTATIVE AMENITIES

This concept illustrates a potential layout that would be consistent with the PUD Agreement and Design Guidelines for the roads, development areas, wetlands, detention, open space, pedestrian system, entrance features and other amenities. The actual layout will vary based on more detailed site engineering evaluation, building/lot sizes, specific nature and needs of the business end users' proposed space and other building requirements, and other factors. More specific plans for the overall development, consistent with the intent will be submitted with future site plans.

50 FT PLANTING BUFFER



DETENTION PONDS WITH OPEN SPACE AMENITIES



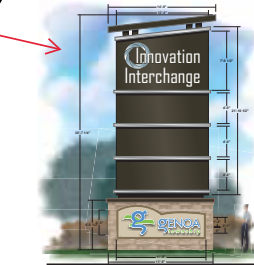
WETLAND OPEN SPACE



POTENTIAL TRAIL CONNECTION TO MARION GENOA DRAIN TO SOUTH

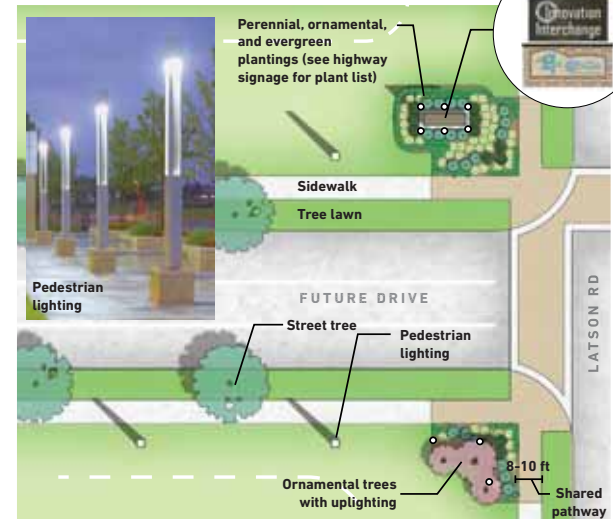


DEVELOPMENT HIGHWAY SIGNAGE



TOWNSHIP GATEWAY SIGN AREA

ENTRY SIGNAGE LANDSCAPE PLAN



Monument sign with uplighting

This is not the sign the Township approved.

This is not the sign the Township approved.

This is not the sign that was previously approved and the revised design needs Township approval.

HIGHWAY DEVELOPMENT SIGNAGE

The highway development signage not only directs travelers to Innovation Exchange, but is also an opportunity to highlight Genoa Township itself. The materiality reflects both the modern construction of the PUD and local materiality.

View from on-ramp



Conceptual illustration of highway development signage

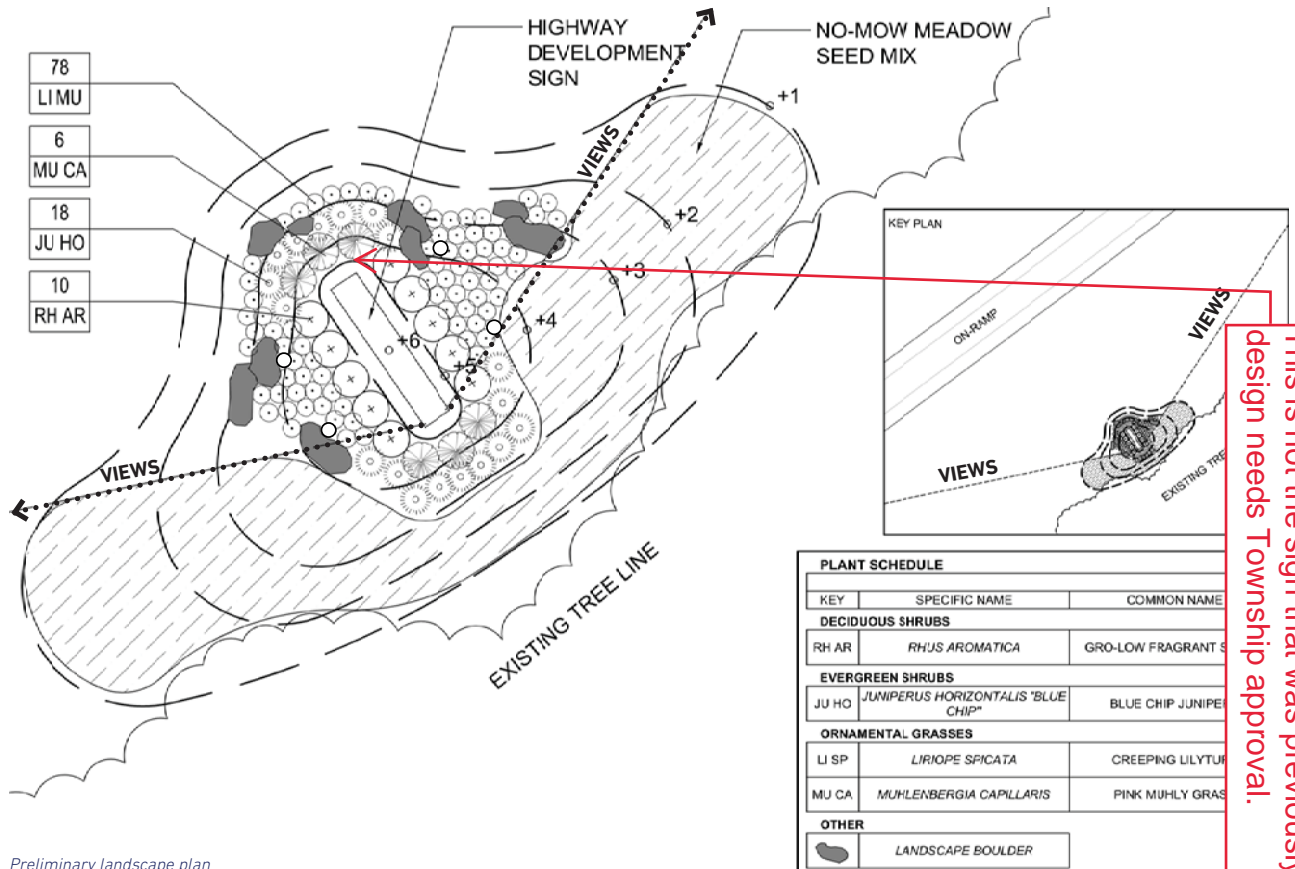


LANDSCAPE PLAN

While the highway development signage is visible from far away on its own, the landscape can complement it at eye-level for an on-ramp passerby. A 6 ft berm lifts the sign itself while blending into the existing tree line. Landscape boulders, matching the signage stone base, emerge from the gradual slope. Low-maintenance plantings surround the foundation and provide year-round interest and physical deterrence to the wayfinding structure.

A. Planting Materials

- Planting materials are to be of a high quality and substantial size to provide a degree of maturity to the appearance of the landscaping immediately upon installation.



Preliminary landscape plan

DESIGN GUIDELINES DEVELOPMENT SIGNAGE AND LANDSCAPE

B. Lawn Areas.

- All areas of a Unit not landscaped with plant materials or hard surfaces or kept as natural wooded areas shall be established as lawn areas by sodding or seeding. Preservation of wooded rear yard areas in their natural condition is strongly encouraged.

C. Edging and Mulching Materials.

- The use of natural cut sod edging to define planting beds is strongly encouraged. Edging materials made of steel, aluminum or plastic may be used to define planting beds.

This is not the sign that was previously approved and design needs Township approval.

OPEN SPACE CONCEPT AND REPRESENTATIVE AMENITIES

This concept illustrates a potential layout that would be consistent with the PUD Agreement and Design Guidelines for the roads, development areas, wetlands, detention, open space, pedestrian systems, entry features and other amenities. The final layout will vary based on more detailed site engineering evaluation, building/lot sizes, specific nature and needs of the developers' proposed space and other building requirements. Specific plans for the overall development, consistent with the intent will be submitted with future site plans.

A minimum 25% of the site shall be open space. Open space will be distributed throughout the site through the buffer zones, pocket parks, preserved woodlot and wetland, with more than half of the open space accessible upland area.

50 FT PLANTING BUFFER



DETENTION PONDS WITH OPEN SPACE AMENITIES



PRESERVED WOODLOT



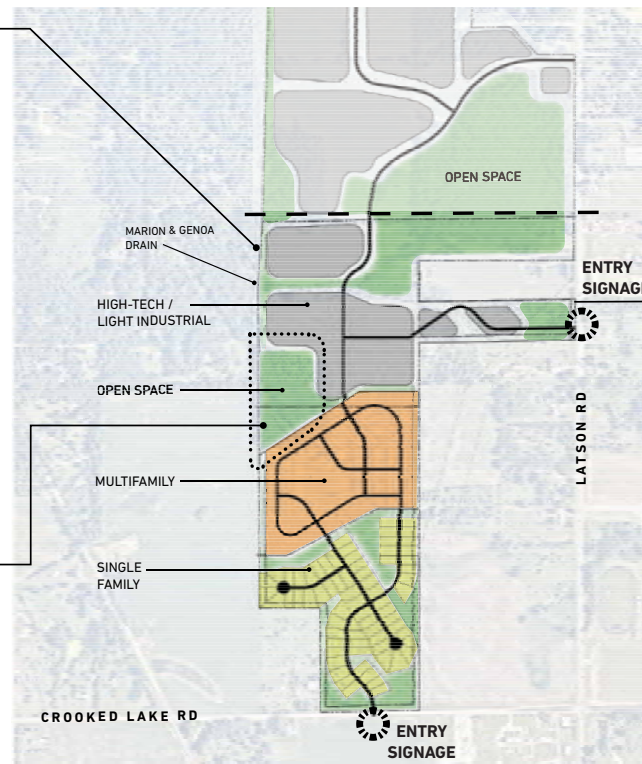
TRAIL CONNECTION TO MARION GENOA DRAIN TO NORTH



NEIGHBORHOOD POCKET PARKS AND OPEN SPACE



ENTRY SIGNAGE & LANDSCAPE ON LATSON ROAD & CROOKED LAKE ROAD CONCEPT

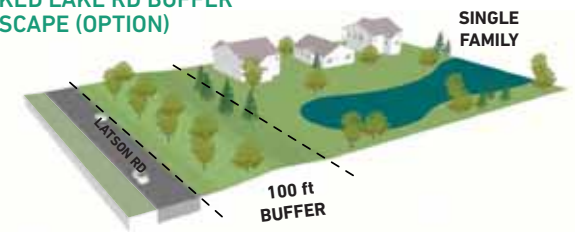


One of several land use configuration options in the PUD

WETLAND OPEN SPACE



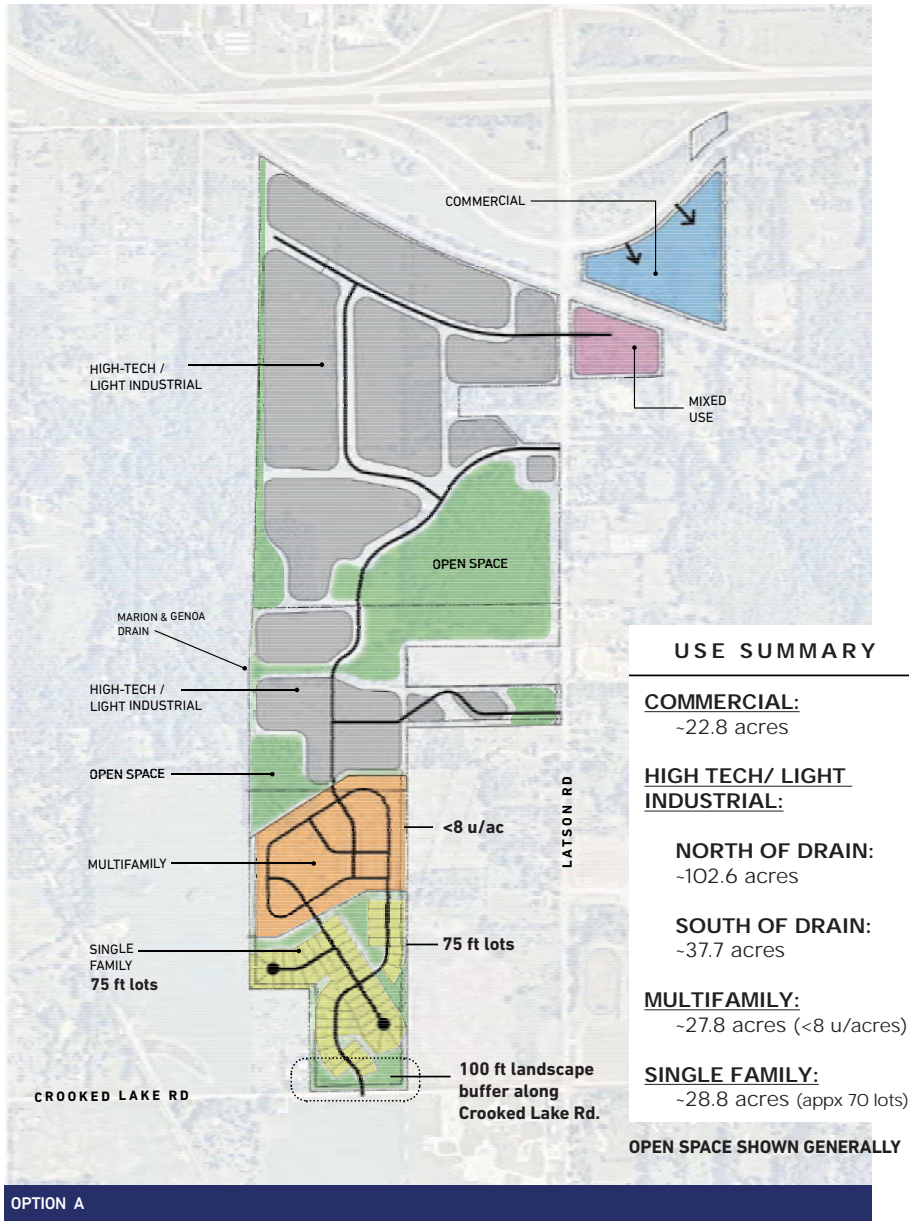
CROOKED LAKE RD BUFFER LANDSCAPE (OPTION)



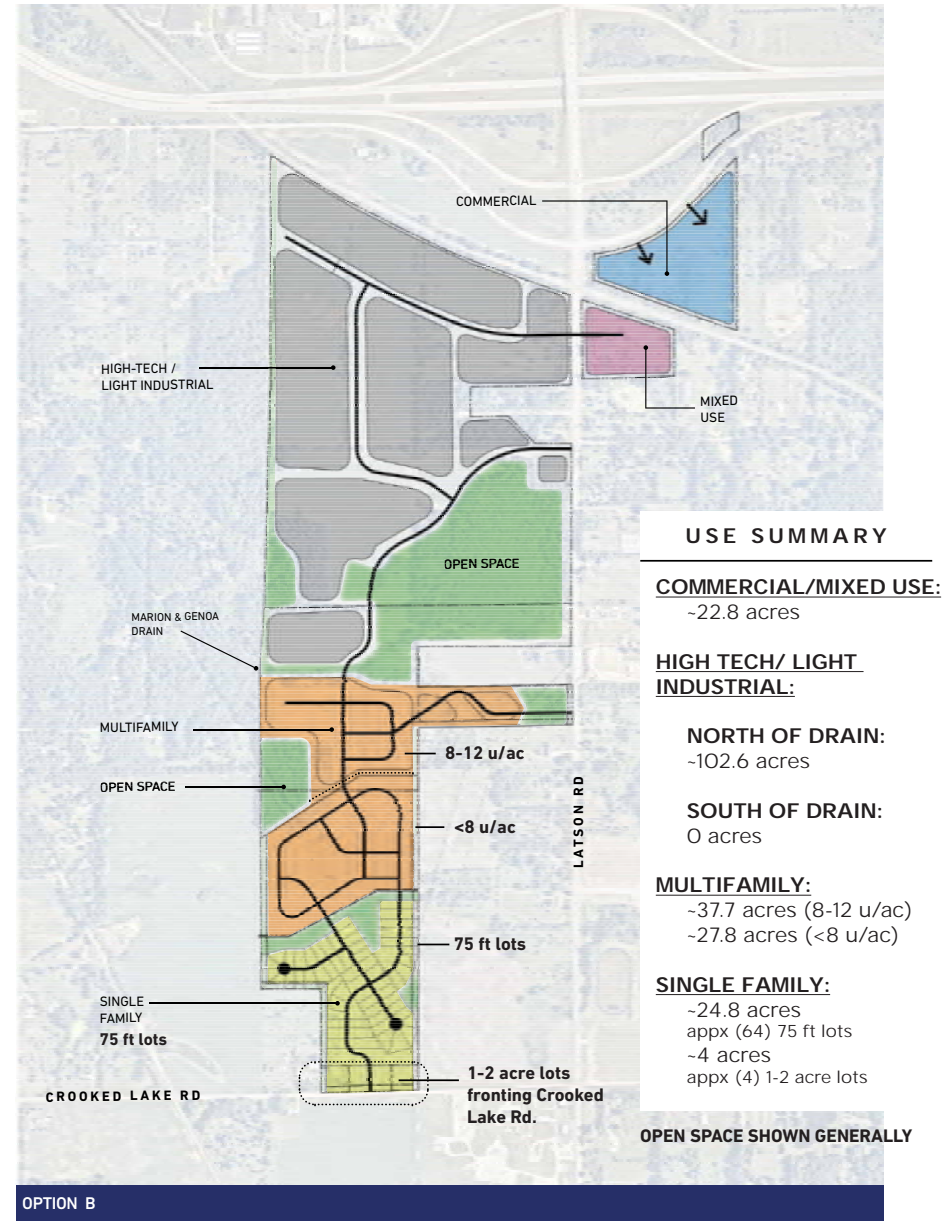
INNOVATION INTERCHANGE

APPENDIX

PRELIMINARY CONCEPTS FOR LAND USES, MAJOR ROADWAYS AND OPEN SPACE



OPTION A



OPTION B

PHASE 2 -PRELIMINARY WETLAND DETERMINATION

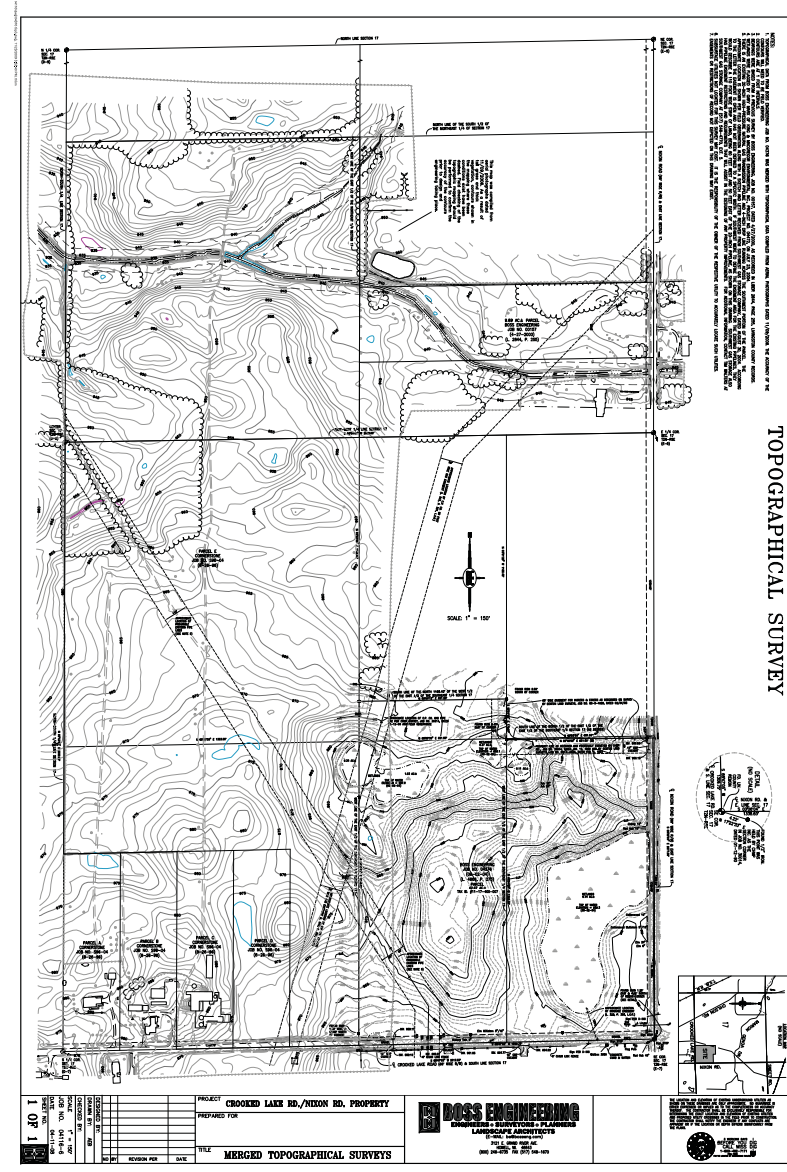


Aerial Source: TerraServer
Privileged & Confidential
 Work Product Prepared at the Request of Counsel

 King & MacGregor Environmental, Inc. 2520 Woodmeadow Drive SE Grand Rapids, Michigan 49546 Phone: (616) 957-1231	Preliminary Wetland Determination For : Hauss Property Genoa Township Livingston County, Michigan		 NORTH NTS	Figure 1
				Wetland Boundaries PROJECT NUMBER 00105-1

S:\HOME REF # FOLDERS\2000 FOLDER\100 THRU 199\00105\APPROX WETLANDS.DWG (02/07/07 8:46 AM).JOHN

PHASE 2 -TOPOGRAPHICAL SURVEY



PROJECT: CROOKED LAKE RD./NELSON RD. PROPERTY PREPARED FOR: DATE:	 BOSS ENGINEERING ENGINEERS - SURVEYORS - PLANNERS LANDSCAPE ARCHITECTS 2011 S. WEST HAVEN GRAND RAPIDS, MI 49508-1001 616-957-1231	TITLE: MERGED TOPOGRAPHICAL SURVEYS
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INNOVATION INTERCHANGE
HIGH-TECH/LIGHT INDUSTRIAL
BUSINESS PARK EXAMPLES

MAY 31, 2023

INDUSTRIAL BUSINESS PARK EXAMPLES

This package includes examples of similar industrial or business parks in Southeast Michigan. The intent is to show that typically there is a great variation in building sizes. Also, quality facades, setbacks, and landscaping have more influence on appearance than building size (to support the requested 200,000 square foot threshold for a special land use).

**VAN BUREN TOWNSHIP
TYLER ROAD AND HAGGERTY ROAD**



(A) Denso International America



STREETVIEW OF INDUSTRIAL PARK



(B) JP Morgan Chase



*Footprints of buildings were estimated by using Google Earth imagery (this does not encompass total square footage of each building that may include mezzanines or upper floors).

LYON TOWNSHIP

GRAND RIVER AVENUE AND AUTOMATION BOULEVARD



(A) Testek Solutions



STREETVIEW OF INDUSTRIAL PARK



*Footprints of buildings were estimated by using Google Earth imagery (this does not encompass total square footage of each building that may include mezzanines or upper floors).

LYON TOWNSHIP

GRAND RIVER AVENUE AND AUTOMATION BOULEVARD



(B) Vacant/Available Property



(C) Kawasaki Robotics Inc.

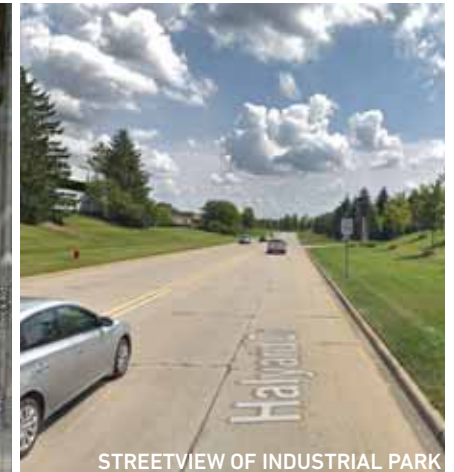


STREETVIEW OF INDUSTRIAL PARK



**Footprints of buildings were estimated by using Google Earth imagery (this does not encompass total square footage of each building that may include mezzanines or upper floors).*

PLYMOUTH TOWNSHIP
BECK ROAD AND HALYARD DRIVE



(A) Adient



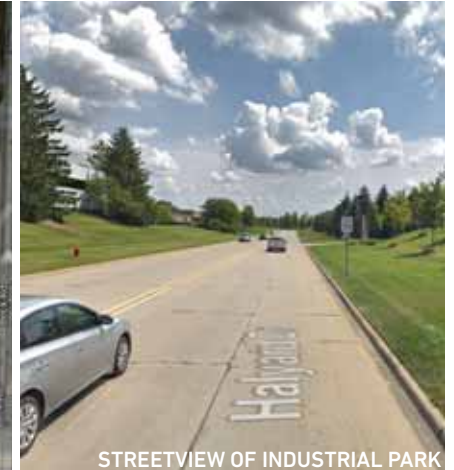
(B) AVL Powertrain Engineering Inc.



*Footprints of buildings were estimated by using Google Earth imagery (this does not encompass total square footage of each building that may include mezzanines or upper floors).

PLYMOUTH TOWNSHIP

BECK ROAD AND HALYARD DRIVE



STREETVIEW OF INDUSTRIAL PARK



(C) Perception



(D) ZWZ Bearing USA Inc



*Footprints of buildings were estimated by using Google Earth imagery (this does not encompass total square footage of each building that may include mezzanines or upper floors).

SHELBY TOWNSHIP
24 MILE AND SHELBY PARKWAY



(A) Antolin



STREETVIEW OF INDUSTRIAL PARK



*Footprints of buildings were estimated by using Google Earth imagery (this does not encompass total square footage of each building that may include mezzanines or upper floors).

SHELBY TOWNSHIP

24 MILE AND SHELBY PARKWAY



(B) EPIC Equipment and Engineering



(C) Polymer Process Development



STREETVIEW OF INDUSTRIAL PARK



*Footprints of buildings were estimated by using Google Earth imagery (this does not encompass total square footage of each building that may include mezzanines or upper floors).



2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

MEMORANDUM

TO: Planning Commission
FROM: Kelly VanMarter, Township Manager
DATE: July 6, 2023
RE: Article 11 – Solar Energy Systems Zoning Ordinance Update

Dear Commissioners,

In response to feedback the following changes have been made to the draft solar energy ordinance related to Utility Solar Energy Systems or Facilities (11.06.05):

- Locational requirements amended to specify that they are permitted by special land use in the Industrial AND Planned Industrial districts.
- References to land enrolled in Farmland Preservation have been removed since the ordinance does not allow facilities on enrolled land.
- Site requirements revised as follows:
 - Minimum site size reduced from 40 to 20 acres.
 - Minimum setback from properties lines reduced from 250 feet to 100 feet.
 - Allowed height increased from 10 feet to 16 feet.

I have also analyzed sites within the specified zoning and have determined that the site requirement regulations do not prohibit the use.

Please let me know if you have any questions or concerns.

Sincerely,

Kelly VanMarter
Township Manager

SUPERVISOR

Bill Rogers

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

Jean W. Ledford

H. James Mortensen

Terry Croft

Diana Lowe

MANAGER

Kelly VanMarter

- The Planning Commission approves the deviation for the height of the retaining wall for the detention pond on the northwest corner of Dorr Road and Grand River.
- The petitioner shall work with township staff to understand opportunities to add signage or entry features at the northwest corner of Dorr Road and Grand River.

The motion carried unanimously.

OPEN PUBLIC HEARING #3...Discussion regarding proposed solar ordinance

Mr. Borden presented the proposed amendments to the township's solar energy systems ordinance.

Commissioner Dhaenens understands the township's desire to not have solar panels allowed in the front yard; however, in some cases, the front yard is the only location for it to be effective. Mr. Borden stated there are some conditions and zoning districts where they are allowed in the front yard.

There was a discussion regarding the requirements regarding property size, setbacks, etc. and if any properties in the Township meet them. Commissioners were asked to send their comments to Ms. Ruthig, and Ms. VanMarter so they could address them and return to the Planning Commission with a final draft of the ordinance.

ADMINISTRATIVE BUSINESS:

Staff Report

Ms. Ruthig stated there will be two items on July's meeting agenda.

Approval of the May 8, 2023 Planning Commission meeting minutes

Moved by Commissioner McCreary, seconded by Commissioner Rauch, to approve the minutes of the May 8, 2023 Planning Commission Meeting as presented. **The motion carried unanimously.**

Member Discussion

There were no items to discuss this evening.

Adjournment

Moved by Commissioner Dhaenens, seconded by Commissioner McCreary, to adjourn the meeting at 8:06 pm. **The motion carried unanimously.**

Sec. 11.06 SOLAR ENERGY SYSTEMS

11.06.01 General:

- (a) **Intent:** The intent of these regulations is to provide suitable locations for Solar Energy Systems to meet a reasonable demonstrated need for renewable energy land uses while providing regulations that limit the impact of these facilities as follows:
- (1) Protect public health, safety, welfare and quality of life by minimizing the potential adverse impacts of a solar energy system.
 - (2) To ensure the compatibility of land uses in the vicinity of the solar energy system.
 - (3) Protect the aesthetic quality of the natural, rural open spaces of the Township and to mitigate adverse impacts to agricultural lands, natural and environmentally-sensitive areas, and developed residential areas; and to preserve scenic views and cultural heritage.
 - (4) Protect neighboring property owners from glare, noise and safety impacts.
 - (5) Protect native vegetation, wildlife and pollinator habitat.
 - (6) To establish standards and procedures by which the siting, design, construction, operation, monitoring, modification, and removal of such systems shall be governed.
 - (7) Land considered for utility solar energy systems shall be within reasonable proximity to an electrical substation and electrical transmission lines to limit potential impact on other areas and uses within the Township.
- (b) **Definitions:**
- (1) **Abandonment:** Any solar energy system or facility that is no longer producing power.
 - (2) **Building Integrated Photovoltaics (BIPVs):** A private solar energy system that is integrated into the structure of a building (rather than a separate mechanical device), replacing or substituting for an architectural or structural component of the building. Building integrated systems include but are not limited to photovoltaic or hot water solar energy systems that are contained within roofing materials such as solar roof tiles or solar shingles, windows, skylights and awnings.
 - (3) **Decommission:** To remove or retire a solar energy system or facility from active service.
 - (4) **Ground-Mounted Solar Energy System:** A private or utility solar energy system that is not attached to or mounted on any roof or exterior wall of any principal or accessory building.
 - (5) **Height:** The height of a solar energy system, measured vertically from the adjacent grade to its highest point at maximum tilt.
 - (6) **Inhabited Structure:** Any existing structure usable for living or non-agricultural commercial purposes, including, but not limited to: working, sleeping, eating, cooking, recreation, office, office storage, or any combination thereof. An area used only for storage incidental to a residential use, including agricultural barns, is not included in this definition. If it is not clear by

this definition, the Zoning Administrator shall make a determination of any structure regarding whether or not it is inhabited.

- (7) **Maximum Tilt:** The maximum angle of a solar array (i.e., most vertical position) for capturing solar radiation as compared to the natural or unaltered ground or topography upon which the solar array is installed.
 - (8) **Minimum Tilt:** The minimal angle of a solar array (i.e., most horizontal position) for capturing solar radiation as compared to the natural or unaltered ground or topography upon which the solar array is installed.
 - (9) **Non-Participating Property:** A property that is not subject to a Utility Solar Energy Facility lease or easement agreement at the time an application is submitted for a Special Land Use for the purposes of constructing a Utility Solar Energy Facility.
 - (10) **Participating Property:** A property that participates in a lease or easement agreement, or other contractual agreement, with or that is owned by an entity submitting a Special Land Use Permit application for the purpose of developing a Utility Solar Energy Facility.
 - (11) **Photovoltaic Array (PV Array):** A device designed to collect and transform solar energy into electricity.
 - (12) **Private Solar Energy System:** A Solar Energy System used exclusively for private purposes with the purpose primarily of generating electricity for the principle use on the site and not used for commercial resale of energy, except for the sale of surplus electrical energy back to the electrical grid.
 - (13) **Repowering:** Replacing or upgrading Solar Energy System to increase power rating of panels or Solar Energy System accessory structures within the approved project footprint. This does not apply to regular maintenance.
 - (14) **Roof or Building-Mounted Solar Energy System:** A private solar energy system that is attached to or mounted on any roof or exterior wall of any principal or accessory building but excluding BIPVs.
 - (15) **Solar Energy System:** Any part of a system or device designed to collect or store solar radiation or energy for the purpose of transforming it into any other form of usable energy or electricity, including the collection and transfer of heat created by solar energy to any other medium by any mean which may include but is not limited to, PV arrays, racks, inverters, transformers, wiring, batteries, and electrical system components.
 - (16) **Solar Carport:** A solar energy system of any size that is installed on a structure that is accessory to a parking area, and which may include electric vehicle supply equipment or energy storage facilities. Solar panels affixed on the roof of an existing carport structure are considered a Roof-Mounted SES.
 - (17) **Solar Farm:** See Utility Solar Energy Facility.
 - (18) **Utility Solar Energy System or Facility:** A Solar Energy System where the principal design, purpose, or use of such system is to provide energy to off-site uses or the wholesale or retail sale of generated electricity to any person or entity.
- (c) **General Provisions:** Solar Energy Systems shall comply with the standards below:

- (1) All Solar Energy Systems shall be permanently and safely attached to the building or structure or to the ground and must conform to the provisions of this Ordinance and all County, State, and Federal regulations, and safety requirements, including applicable building codes and applicable industry standards, including those of the American National Standards Institute (ANSI).
- (2) Solar Energy Systems shall be installed, maintained and used only in accordance with the manufacturer's directions. Upon request, a copy shall be submitted to the Township or building official prior to installation. The Township may inspect the completed installation to verify compliance.
- (3) If an applicant or operator of a Solar Energy System fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke any approvals after giving the applicant notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

11.06.02 **Private Solar Energy System:**

- (a) Private Solar Energy Systems shall be permitted as an accessory use in all zoning districts, subject to the following:
 - (1) A land use permit from the Township is required for the installation of any private solar energy system. The applicant is responsible for contacting the building department to determine if a Private Solar Energy System requires a building permit. The application must include:
 - a. A site plan depicting setback, panel size and location, wiring location, lot coverage, location of property lines, buildings, structures, fences, greenbelts, and road right of ways. The site plan must be drawn to scale.
 - b. Photographs of the property's existing condition.
 - c. Renderings or catalogue cuts of the proposed solar energy equipment.
 - d. A certificate of compliance demonstrating that the system has been tested and approved by Underwriters Laboratories (UL) or other approved independent testing agency acceptable to Township.
 - e. A copy of the manufacturer's installation directions.
 - (2) The exterior surfaces of solar energy systems shall be generally neutral in color and substantially non-reflective of light. A unit may not be installed or located so that sunlight or glare is reflected into neighboring uses or onto adjacent streets.
 - (3) Solar energy systems shall be located in the least visibly obtrusive location where panels would remain functional.
 - (4) Batteries associated with Private Solar Energy Systems must be located within a secured container or enclosure.
 - (5) Solar energy systems that are damaged or are no longer in use for a period of one (1) year shall be replaced or removed by the property owner within six (6) months of the date of damage or abandonment.

- (6) Signage shall be provided in a visible location with disconnection procedures for emergency first responders.
- (7) All power transmission lines, wires, or conduits from a ground-mounted Private Solar Energy System to any building or other structure shall be located underground.

11.06.03 **Ground Mounted Private Solar Energy System.** Ground Mounted Private Solar Energy Systems are permitted in all zoning districts as an accessory use, subject to the following:

- (a) Ground Mounted Private Solar Energy Systems are subject to special land use review except small residential accessory systems which occupy less than 500 square feet in area are subject to administrative review of a land use permit.
- (b) Location. Ground Mounted Private Solar Energy System shall only be located in the non-required rear or side yard for principal buildings in the zoning district in which it is located. The unit may be located in the front yard only if permitted by the Planning Commission provided that the unit is no less than two-hundred (200) feet from the front lot line.
- (c) Size. The total combined area of all Ground Mounted Private Solar Energy System must not exceed one (1) percent of the size of the lot with a maximum of 2,500 square feet.
- (d) Lot Coverage. The total area of ground-mounted solar energy collectors shall be included in the calculation of maximum permitted lot coverage for impervious surface.
- (e) Height. 16 feet maximum, measured from the natural grade below the unit to the highest point when oriented to maximum tilt.
- (f) All power transmission lines, wires, or conduits from a ground-mounted Private Solar Energy System to any building or other structure shall be located underground.
- (g) Screening. Greenbelt screening is required around any Ground Mounted Private Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from adjacent residences. The greenbelt shall consist of shrubs, trees, and other non-invasive plant species that provide a visual screen. In lieu of a planting greenbelt, a decorative fence may be used if approved by the Planning Commission.

11.06.04 **Building Integrated Photovoltaics.** Private solar energy system BIVPs shall be permitted in all zoning districts and shall be subject to the zoning regulations applicable to the structure or building to which they are integrated. BIVP's must comply with the general provisions of 11.06.01(c).

11.06.04 **Roof or Building Mounted Private Solar Energy Systems:**

- (a) Weight and Installation: A roof or building mounted unit shall be only of such weight as can safely be supported by the structure. Proof thereof, in the form of certification by a professional engineer or other qualified person, shall be submitted to the Township prior to installation.
- (b) Application: Applications for building and roof mounted solar energy systems must include horizontal and vertical elevation drawings that show the location and height of the system on the building and the dimensions of the system.
- (c) Location: Wall-mounted units shall not be located on the front yard elevation wall of a building.
- (d) Height:

- (1) Wall-mounted units shall not exceed the height of the building wall to which they are attached.
 - (2) A roof-mounted system shall not project more than three (3) feet above the highest point of the roof and shall not exceed the maximum building height for the zoning district in which it is located.
- (e) Extension: A solar energy collector that is mounted on a building in an area other than the roof shall not extend vertically beyond the wall on which it is mounted and shall not extend more than twelve (12) inches beyond the wall on which it is mounted and may not extend into a required yard.

11.06.05 **Utility Solar Energy System or Facility**

- (a) Intent and Purpose. The intent and purpose of this Section is to establish standards for the siting, installation, operation, repair, decommissioning, and removal of Utility Solar Energy Systems or Facilities; establish the process for the reviewing and permitting of such facilities; protect the health, welfare, safety, and quality of life of the general public; and ensure compatibility with land uses in the vicinity of the areas affected by such facilities.
- (b) Locational Requirements. Utility Solar Energy Systems or Facilities are permitted by special land use in the Industrial (IND) and Planned Industrial (PID) Districts. Utility solar energy systems and facilities are not permitted on property enrolled in the Farmland and Open Space Preservation Act, being in PA 116, of 1974, now codified in Part 361 of the Natural Resources and Environmental Protection Act, PA 451 of 1974, as amended.
- (c) Application Requirements. An applicant proposing a Utility Solar Energy System or Facility must comply with the Special Land Use requirements of Article 19 and the Site Plan review requirements of Article 18. The information, plans, documents, and other items identified as application requirements in this ordinance, including the site plan and special land use permit, are substantive requirements for obtaining approval for a Utility Solar Energy System or Facility. The Planning Commission will review the sufficiency of the application materials. If the Planning Commission determines that the substance of any application item is insufficient to protect the public health, safety, and welfare, the Planning Commission may deny approval on that basis. In addition, the applicant for a Utility Solar Energy System of Facility shall provide the Township will all of the following:
 - (1) Applicant Identification. The name of the applicant, any parent company or subsidiary of the parent company, along with any “doing business as” of the parent company along with address in full. A statement that the applicant is the owner involved or is acting on the owner's behalf. The address of the property involved in the application (substitution may include a legal description and parcel identifications number(s)), and any additional contact information. Each application for a Utility Solar Energy Facility shall also be dated to indicate the date the application is submitted to the Township.
 - (2) A complete of the agreement including all exhibits and attachments between the applicant and the utility company that will be purchasing electricity from the proposed Utility Solar Energy System or Facility.
 - (3) An affidavit or evidence of an agreement between the lot owner or operator confirming the owner or operator has the permission of the property owner to apply for the necessary permits for construction and operation of Utility Solar Energy System or Facility.
 - (4) Parcel Numbers. A list of all parcel numbers that will be used by the Utility Solar Energy System or Facility including applicable attachments, establishing ownership of each parcel, with all lease agreements, easements, or purchase agreements for the subject parcels.

- (5) Project Description. A general description of the proposed project including a legal description of the property or properties on which the project would be located and an anticipated construction schedule.
- (6) Insurance. Proof of the general liability insurance to cover the Utility Solar Energy Facility, the Township, and the Landowner.
- (7) Certifications. Certification that applicant will comply with all applicable state and federal laws and regulations. ~~Land enrolled in the Michigan Farmland Preservation Program must provide confirmation of approval from the Michigan Department of Agriculture to locate a Utility Solar Energy System or Facility on the property before issuance of a certificate of zoning compliance.~~
- (8) Compliance with the County Building Code and the National Electric Safety Code. Construction of a Utility Solar Energy System or Facility shall comply with the National Electric Safety Code and the County Building Code (as shown by approval by the County) as a condition of any Special Land Use Permit under this section. In the event of a conflict between the County Building Code and National Electric Safety Code (NESC), the NESC shall prevail.
- (9) Operations and Maintenance Agreement. This agreement shall include landscaping upkeep, regular checks, and maintenance with a detailed description of operations and parameters including anticipated regular and unscheduled maintenance and the hours maintenance will take place, the name and contact information of the certified operator, the applicant's equipment maintenance and repair plan, the applicant's inspection protocol, and general safety documentation as well as consequences and penalties for noncompliance. This agreement shall attach copies of manufacturer's directions and/or instruction manuals for installing, maintaining and using the Utility Solar Energy System or Facility.
- (10) Hazardous Waste Plan. A plan for managing hazardous waste shall be provided. This plan shall include Manufacturers' Safety Data Sheets (MSDS) and documentation of the type, quantity and storage procedures of all materials used in the operation of all equipment.
- (11) Environmental Impact: Copy of the Environmental Impact Assessment meeting the requirements of 11.06.05(c)(36)(f) section and those of Section 18.07.
- (12) Sound modeling study including sound isolines extending from the sound sources to the property lines and indicating compliance with the requirements of 11.06.05(c)(36)(h).
- (13) Wildlife Impact: A wildlife impact study, including an analysis of the impact on the properties within one mile of the project and meeting the requirements of 11.06.05(c)(36)(e).
- (14) A ground cover vegetation establishment and management plan shall be provided and shall meet the requirements of 11.06.05(c)(36)(i).
- (15) A groundwater analysis of all parcels in the participating property shall be provided.
- (16) Glare Study: An analysis by a third-party qualified professional acceptable to the Township to determine if glare from the Utility-Scale Solar Energy System will be visible from nearby residents and roadways. If required, the analysis will consider the changing position of the sun throughout the day and year and its influences on the utility-scale solar energy system.
- (17) Stormwater Study: An analysis by a third-party qualified professional acceptable to the Township studying the proposed layout of the Utility-Scale Solar Energy System and how the

spacing, row separation, and slope affects stormwater infiltration, including calculations for a 100-year rain event. Percolation tests or site-specific soil information must be provided to demonstrate infiltration on-site without the use of engineered solutions.

- (18) Visual Impact Assessment Analysis. —A technical analysis by a third party qualified professional of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscape and other screening measures) a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project and documented on the site plan.
- (19) Decommissioning and Land Reclamation Plan: This plan shall describe the actions to be taken following the abandonment or discontinuation of the Utility Solar Energy System or Facility, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the system or facility and restore the subject parcels to a native state. This plan shall include the format of a financial security to be applied to the decommissioning process. This plan shall also comply with the requirements of Section 11.06.05(c)(37).
- (20) Complaint Resolution Protocol: A plan for resolving complaints from the public or others concerning the construction and operation of the Utility Solar Energy System or Facility. This plan shall comply with the requirements as provided in Section 11.06.05(c)(38).
- (21) Emergency Action Plan: Copy of a plan for the actions to be taken in event of an emergency. The emergency action plan must include a fire suppression plan, including the technology to be used and the training and equipment to be provided to Township or other firefighters before the facility becomes operational. The emergency action plan must include plans for immediate cleanup and long-term aftermath efforts following an emergency.
- (22) Proof of approval by Livingston County, Road Commission, and Drain Commission.
- (23) The applicant must also obtain a permit from the Livingston County Road Commission or Michigan Department of Transportation (MDOT) for permission to connect access roads to existing County or State roads and from the Livingston County Drain Commission for any culverts or other drainage facilities.
- (24) Proof that the Applicant and/or its contractor has informed the Livingston County Road Commission (LCRC) and the Township of all the roads they propose to use as haul routes to each construction (including repair and decommissioning) site. This shall be done prior to beginning any construction (or decommissioning) at any site. A third-party road inspector will be retained, with mutual approval of the Township, the Applicant, and the LCRC or the Michigan Department of Transportation (MDOT) if a state highway is involved. The road inspector will determine any precautions to be taken (including videotaping and physical inspections) during the process to determine any damage that may be caused by Applicant's contractor(s), and then determine the appropriate road standards and measures to be taken to repair the damage. The cost of the third-party road inspector and/or any other required third-party assistance, and of all repairs necessitated to restore the roads [and related property which may be damaged by the contractor(s)], shall be the responsibility of the Applicant and/or their contractor, and shall in no case be the responsibility of the Township.
- (25) Anticipated construction schedule including timeline to completion and scope of work.
- (26) A complete description of the proposed technology to include type of solar panel and system, maximum height, fixed mounted versus tracking, number of panels and angles of orientation.

- (27) Current ground and aerial photographs and video of the entire development area prior to construction.
- (28) Proof of environmental compliance, including compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances; Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.); Part 303, Wetlands (MCL 324.30301 et. seq.); Part 365, Endangered Species Protection (MCL324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township.
- (29) An attestation that the applicant will indemnify and hold the Township harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the Solar Energy System. The Township shall be named as an additional insured for such indemnity under 3.(vi.).
- (30) Airport Review: Any Solar Energy System must be reviewed using the current Solar Glare Hazard Analysis Tool (SGHAT) available through Sandia National Laboratories or a commercially available equivalent. The SGHAT will be used to ensure that airports and those that use them will not be affected by unwanted visual or ocular impacts. The process is designed to save costs and increase public safety.
 - a. The Study shall determine if there are any potential adverse effects on any registered airfield within ten miles of the project. Effects noted, but not exclusively, should include any possible decreased safety and utility.
 - b. In addition, all proposed solar facilities must obtain a Determination of No Hazard (DNH) from the Federal Aviation Administration (FAA). A DNH does not eliminate the need for the SGHAT study nor does it in any way eliminate the standard for glare on roadways or non-participating parcels.
 - c. The DNH must be obtained prior to breaking ground on any portion of the Solar Energy System.
 - d. No Solar Energy System that impacts safety or utility of any registered airfield shall be permitted.
- (31) Any other relevant studies, reports, certificates, or approvals as may be reasonably required by the Planning Commission.
- (32) Site Plan Requirements shall be submitted meeting the requirements of Section 18.04 and in addition, shall also include the following:
 - a. The approximate height, and dimensions of all existing structures, existing parcel drainage tile layouts, water bodies, waterways, floodplains, landscaping, and fencing, on the parcels planned for Solar Energy installation including other parcels within one thousand (1000) feet of the project's boundaries.
 - b. Documentation of existing vegetation, floodplains and regulated and/or endangered species.

- c. Indication of how and where the system will be connected to the power grid.
- d. Photometric plan meeting the requirements of Section 12.03.07.
- e. Plan(s) showing the location of proposed Utility Solar Energy System or Facility including panels, equipment, transformers, inverters, fencing, underground and overhead wiring (including the depth of underground wiring), new drainage facilities (if any), access drives (including width), substations and accessory structures, along with a note indicating where any trees measuring over 2.5 feet in diameter within six inches of grade are to be removed.
- f. Plan for ground cover establishment and management.
- g. Plan for providing wildlife corridor that provides access for wildlife to navigate through the project.
- h. Security plan detailing measures to prevent unauthorized trespass and access during the construction, operation, removal, maintenance, or repair of the Utility Solar Energy System or Facility.
- i. Application Fee. Review fees shall be submitted for a Special Use application and Site Plan Review application. If requested by the Planning Commission, the applicant shall provide an escrow fee to the Township in the amount specified by the Zoning Administrator to cover the costs associated with but not limited to independent review by experts.

(33) Site Requirements.

- a. The site shall be at least ~~twenty forty~~(240) acres.
- b. The site may consist of a single participating property or multiple participating properties.
- c. The site and all fenced compounds shall have access described below.
 - i. There shall be direct access from a public road or an access easement with a maximum length of one thousand (1,000) feet and a width of at least thirty-three (33) feet.
 - ii. Access drives shall be paved with a permanent, durable and dustless surface and shall be graded and drained to dispose stormwater without negatively impacting adjacent property. The Township Board, following a recommendation of the Planning Commission and the Township Engineer, may approve a gravel surface for low intensity use drives, upon a finding that neighboring properties and the environment will not be negatively impacted and that the surface is sufficient to support fire apparatus and provide access at all times of the year.
- d. Utility Solar Energy Systems (including all solar panels, components, equipment and related accessory structures) must be set back at least ~~one two~~ hundred ~~fifty~~(100~~250~~) feet from the property line of any Non-Participating Property at the time of application. If a single Utility Solar Energy System is located on more than one lot, or if the adjacent parcel is owned by the same owner as the property on which the Utility Solar Energy

System is located, then the Planning Commission may eliminate the lot-line setbacks of this subsection for the lot lines shared by those lots. All property in the setback areas, ~~if not farmed,~~ shall be maintained as defined in a maintenance setback plan acceptable to the Township.

- e. Utility Solar Energy Systems must be set back at least one hundred (100) feet from the edge of any road or rail right-of-way, wetland, shoreline, river, wellhead protection area or drain easement. The Planning Commission may increase this setback requirement up to 200 feet if the Planning Commission determines that such a setback is necessary to protect the public health, safety, and welfare.
 - f. Utility Solar Energy Systems must be set back at least five hundred (500) feet ~~from~~ from non-participating residential dwellings, churches or religious institutions, schools, family or group child day-care homes, bed and breakfast establishments, residential facilities, and any other residence or inhabited structure.
 - g. The height of the Utility Solar Energy System and any mounts, buildings, accessory structures, and related equipment must not exceed sixteen (16)~~10~~ feet when oriented at maximum tilt. ~~The Planning Commission may allow a height of up to 16 feet if the applicant establishes that the lot is used for grazing by farm animals in a manner that requires increasing the height limit.~~ Lightning rods shall not exceed 20 feet in height and shall not be any greater than necessary to protect the Utility Solar Energy System from lightning.
 - h. The ground mounting of panels must be by screw or a similar system that does not require a footing, concrete, or other permanent mounting, to minimize soil compaction. No pounding of panel posts is permitted.
 - i. Permits. All required county, state, and federal permits must be obtained before commencement of construction of the Utility Solar Energy System.
- (34) Buffer and Screening Requirements. Greenbelt screening is required around any Utility Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible. There shall be a landscape buffer at least fifty (50) feet wide along the exterior of the fenced compound with plantings required as described below.
- a. Where adjacent to a residential use or zoning district, the buffer shall include an eight (8) foot tall landscaped berm upon which the required landscaping will be placed.
 - b. An evergreen buffer shall contain two rows of staggered evergreen trees planted not less than twelve (12) feet apart trunk to trunk, and the two rows shall be ten (10) ft apart. The buffer shall also include native shrubs planted with spacing of not more than six (6) feet apart on center. The Township may consider an alternative landscape buffer as a part of the special land use approval provided the alternative provides adequate screening.
 - c. Evergreen plantings shall be least eight (8) feet tall at time of planting, measured from the top of the root ball to the base of the leader (not including the height of the leader) and must be a species that can reasonably be expected to reach a height of ten (10) feet within three (3) growing seasons.
 - d. Native shrub plantings shall be a least two (2) feet tall at the time of planting measured from the top of the root ball to the top of the shrub.

- e. The trees may be trimmed but must maintain a height of at least eighteen (18) feet.
 - f. The overall landscape plan shall not contain more than 33% of any one plant species. The use of trees native to the area, and mixture of trees from the same species association, is encouraged.
 - g. Good arboricultural techniques shall be followed with respect to vegetation, including but not limited to, proper pruning, proper fertilizing, and proper mulching, so that the vegetation will reach maturity as soon as practical and will have maximum density in foliage. Dead or diseased vegetation shall be removed and must be replanted in a manner consistent with this Section at the next appropriate planting time.
- (35) Appearance. The exterior surface of the Utility Solar Energy System must be generally neutral in color and substantially non-reflective of light.
- (36) Performance Standards:
- a. Utility Solar Energy Systems or Facilities shall be designed, constructed, operated, and maintained in compliance with all applicable provisions of local, state, and federal laws and regulations.
 - b. PV Array Components: PV array components shall be approved by the Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electronic Testing Laboratories (ELL), or other similar certification organization if the similar certification organization is acceptable to the Township.
 - c. Fencing: If regulations require fencing, the Utility Solar Energy System or Facility compounds may be completely surrounded by a fence designed to prevent unauthorized access.
 - i. The fence shall be at least seven (7) feet tall without barbed wire and posts shall extend at least thirty-six (36) inches into the ground.
 - ii. Gate posts and corner posts shall have a concrete foundation.
 - iii. The fence shall be a woven agricultural-style fence or other design as approved by the Planning Commission.
 - iv. Gates shall be provided at all access points, unless otherwise permitted or approved. Gates for vehicular access shall be approved by the Fire Authority.
 - v. Gates shall be the same height and constructed of the same material as the fencing. Access, such as knock box, shall be provided for emergency responders.
 - vi. The Township may require or allow a fence design to allow for the passage of wildlife upon a finding that adequate access control and visual screening will be preserved.
 - vii. Alternate fencing may be approved by the Township upon a finding that the alternative provides adequate access control and visual screening.

- d. Safety:
- i. All collection system wiring shall comply with all applicable safety and stray voltage standards.
 - ii. All electrical connection systems and lines from the Utility Solar Energy System or Facility to the electrical grid connection shall be located and maintained a minimum of six (6) feet underground within and adjacent to the site.
 - iii. All access gates and doors to Utility Solar Energy System or Facility compounds and electrical equipment shall be lockable and kept secured at all times when service personnel are not present.
 - iv. The applicant shall be responsible for maintenance of the access roads.
 - v. The manufacturers or installer's identification and appropriate warning signs shall be posted on or near solar panels in a clearly visible manner.
 - vi. Fire suppression plans and Safety Data Sheets shall be kept on-site and be accessible for emergency responders.
 - vii. The applicant will provide an unredacted copy of the manufacturer's safety manual for each component of the Utility Solar Energy System without distribution restraints to be kept at the Township Hall or other locations deemed necessary by Planning Commission or local first responders. The Manual should include standard details for an industrial site such as materials, chemicals, fire, access, safe distances during system or facility failure, processes in emergencies, etc.
 - viii. The Township shall have the right upon issuing any Solar Energy System or Facility special use permit to inspect the premises on which each system is located at any reasonable time. The Township may hire a consultant to assist with any such inspections at a reasonable cost to be charged to the operator of the Solar Energy System or Facility.
 - ix. Advertising or non-project related graphics shall be prohibited. This exclusion does not apply to signs required by this Ordinance.
 - x. Signs shall be posted at entrances to Utility Solar Energy System or Facility compounds containing emergency contact information, operator contact information, and complaint resolution information. The Township may require additional signs with this information on the fence surrounding the compound.
 - xi. The Utility Solar Energy System or Facility owner, operator, and property owner shall be responsible, jointly and severally, for mitigating erosion, flooding, and all other environmental impacts resulting from the Utility Solar Energy System or Facility.
 - xii. The Utility Solar Energy System or Facility owner, operator, and property owner shall be responsible, jointly and severally, for making repairs to any public roads, drains, and infrastructure damaged by the construction of, use of,

or damage to, a Utility Solar Energy System or Facility. Any solar panel damaged beyond repair or use must be removed from the project site within five days and must be disposed of off-site in accordance with any state or federal requirements.

- xiii. Utility Solar Energy Systems or Facilities shall not have any on-site battery storage systems for the sale of stored energy.
- xiv. Plants or grasses not part of the buffer area shall be maintained not to exceed a height of twelve (12) inches. The Township may approve a taller height upon a finding that it will not result in a nuisance.

e. Wildlife Impact:

- i. The applicant shall have a third-party qualified professional, acceptable to the Township, conduct an analysis to identify and assess any potential impacts on wildlife and endangered species. The applicant shall take appropriate measures to minimize, eliminate, or mitigate adverse impacts identified in the analysis. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts.
- ii. Sites requiring special scrutiny include wildlife refuges, other areas where birds are highly concentrated, bat hibernacula, wooded ridge tops that attract wildlife, sites that are frequented by federally or state listed endangered species of birds and bats, significant bird migration pathways, and areas that have landscape features known to attract large numbers of raptors.
- iii. At a minimum, the analysis shall include a thorough review of existing information regarding species and potential habitats in the vicinity of the project area. Where appropriate, surveys for bats, raptors, or general avian use should be conducted. The analysis shall include the potential effects on species listed under the federal Endangered Species Act and Michigan's Endangered Species Protection Law. The applicant shall follow all pre-construction and post-construction recommendations of the United States Fish and Wildlife Service.
- iv. The analysis shall indicate whether a post-construction wildlife mortality study will be conducted and, if not, the reasons why such a study does not need to be conducted. Power lines should be placed underground, when feasible, to prevent avian collisions and electrocutions. All above-ground lines, transformers, or conductors should follow any Avian Power Line Interaction Committee (APLIC, <http://www.aplic.org/>) guidelines to prevent avian mortality.

f. Environmental Impact:

- i. The applicant shall have a third-party qualified professional, acceptable to the Township, conduct an analysis to identify and assess any potential impacts on the natural environment including, but not limited to, wetlands and other fragile ecosystems, historical and cultural sites, and antiquities. The applicant shall take appropriate measures to minimize, eliminate, or mitigate adverse impacts identified in the analysis.

- ii. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts. The applicant shall comply with applicable parts of the Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, MCL 324.101 et seq.) including but not limited to Part 31 Water Resources Protection (MCL 324.3101 et seq.), Part 91 Soil Erosion and Sedimentation Control (MCL 324.9101 et seq.), Part 301 Inland Lakes and Streams (MCL 324.30101 et seq.), Part 303 Wetlands (MCL 324.30301 et seq.), Part 323 Shoreland Protection and Management (MCL 324.32301 et seq.), Part 325 Great Lakes Submerged Lands (MCL 324.32501 et seq.), and Part 353 Sand Dunes Protection and Management (MCL 324.35301 et seq.).
- g. Spacing. Utility Solar Energy Systems or Facilities shall be at least two thousand five hundred (2,500) feet from any adjacent, existing Utility Solar Energy System or Facility.
- h. Noise. The noise generated by a utility-scale solar energy system must not exceed the following limits:
 - i. Forty (40) Dba Lmax, as measured at the lot line of the project property.
 - ii. Thirty-Five (35) Dba Lmax, as measured at the lot line of the project property, between the hours of 9:00 p.m. and 7:00 a.m.
 - iii. In addition to the above limitations, a sound barrier of a solid decorative masonry wall or evergreen tree berm, with trees spaced not less than 10 feet apart, must be constructed to reduce noise levels surrounding all inverters. The berm must be no more than ten (10) feet from all inverters, must be at least as tall as all inverters but not more than three (3) feet taller than the height of all inverters.
 - iv. The noise level by a Utility Solar Energy Facility must be inspected every three (3) years, at the operator's expense, by an auditory expert to ensure compliance with these noise requirements.
- ~~i. Groundcover. Utility Solar Energy Facilities shall include the installation of at least one (1) of the following types of dual use perennial ground cover vegetation to promote ecological benefits. The perennial ground cover vegetation ~~that~~ shall be maintained for the duration of operation until the site is decommissioned.~~
- ~~j.~~
- ~~k. Land enrolled or bound by the Farmland Preservation Program must follow the Michigan Department of Agriculture and Rural Development's Policy for Allowing Commercial Solar Panel Development on PA-116 Lands.~~
- ~~l.~~
- ~~m.i. Land not enrolled or bound by the Farmland Preservation Program must provide at least one (1) of the following types of dual use ground cover to promote ecological benefits:~~
 - i. Pollinator habitat with a score of at least seventy-six (76) on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites (www.pollinators.msu.edu);
 - ii. Conservation cover focused on restoring native plants, grasses, or prairie with the aim of protecting specific species, such as bird habitat, or providing specific ecosystem services, such as carbon sequestration or improving soil health;

- iii. Incorporation of rotational livestock grazing and forage production as part of an overall vegetative maintenance plan; or
 - iv. Raising crops for food, fiber, or fuel and generating electricity within the site to maximize land use.
 - v. The Township may approve or require alternative ground cover upon finding it is not feasible to provide groundcover as defined above.
 - vi. All groundcover must be native plants with substantial root system to support soil. Turf grass is not permitted as ground cover.
 - vii. Invasive species and noxious weeds are not permitted and must be removed in a timely manner.
- ~~n.j.~~ n.j. Lighting. Lighting shall be limited to inverter or substation locations only and shall comply with 14.04(E) Lighting.
- ~~o.k.~~ o.k. Emergency Action Plan; Emergency Training. Before the Utility Solar Energy System or Facility is operational, it must provide the necessary training, equipment, or agreements specified in the application to Township or other emergency personnel.
- ~~p.l.~~ p.l. General Liability Insurance; Bonding Requirements; Escrow Requirements.
- i. Utility Solar Energy Systems or Facilities shall have and maintain general liability insurance of at least ten million (\$10,000,000.00) dollars. The Township may require a higher amount for larger projects and may allow for a lesser amount for smaller projects upon a finding that the alternate amount is more consistent with the likely risk.
 - ii. In addition, In order to assure the funds will be available to perform all road repairs required under this ordinance, the Applicant will be required to post financial security acceptable to the Township, in the form of: a) a surety bond from a surety listed as acceptable on the Federal Surety Bond circular 570 of the U.S. Department of Treasury; or b) an acceptable letter of credit; or c) an escrow account established in a financial institution licensed in the State of Michigan. The amount of the security shall be a minimum of one million two hundred fifty thousand dollars (\$1,250,000), but this amount may be increased if the third-party consultant determines the amount needed for road repairs is greater than this amount. The bond (or other security) shall only be released (in whole or part) when the Township Board, in consultation with LCRC and the third-party inspector, determines that all required road work has been completed and approved by LCRC and/or MDOT.
 - iii. General Maintenance Bond. The Township shall require a General Maintenance Bond to guarantee all aspects of this Ordinance are met at all times during the construction and operation of the Utility Solar Energy System. At the time of the Special Use application, the Applicant shall submit two third-party contractor bids for construction of all fencing, landscaping, and drainage improvements associated with the Utility Solar Energy System, and the bond shall be the higher of the two bids. The Township may use the bond to repair any landscaping, fencing, drainage infrastructure (including drainage tiles), and/or to correct any ongoing violation of this Ordinance, in the event

that the facility fails to adequately maintain the required site improvements, or fails to make operational changes to correct an operational violation.

- iv. The Applicant shall be required, as a condition of the operation, to fund an escrow account for investigation of complaints for, but not limited to glare, stray voltage, noise, and signal interference in the amount of \$15,000.00 to be used at the discretion of the Township Board to pay for third party investigative services, the provider of which shall be chosen by the Township. Such funds shall be deposited with the Township Treasurer, or with a third-party fiduciary, at the discretion of the Township. When the escrow account balance is below \$5,000.00 the Township shall notify the Applicant and the Applicant shall replenish the account to the amount of \$15,000.00 within 45 days.

~~e.m.~~ Repowering or Modifications. Any modifications of an approved site plan that are made after the initial date of approval, including an expansion of project, shall be resubmitted to the Township Planning Commission for review at an additional fee based upon current fee schedule. Any changes of the approved site plan, subject to this Ordinance as it exists at time of application, will require a new site plan application and review, including reconfiguration of arrays, updating current technology, and Solar Energy Facility infrastructure.

~~f.n.~~ The Applicant must submit an attestation that the Applicant will indemnify and hold the Township harmless from any costs or liability arising from the approval, installation, construction, use, maintenance, repair, or removal of the Utility Solar Energy System.

~~s.o.~~ Prior to the start of construction, any existing drain tile must be inspected by robotic camera and the imagery submitted to the township for baseline documentation on tile condition. Any damage shall be repaired, and a report submitted to the landowner and Township. While the facility is in operation, the owner or operator must reinspect the drain tiles every three years by robotic camera for any damage and must repair any damage within 60 days of discovery. The owner or operator must report the inspection, along with any damage and repair, to the Township within 90 days after each three-year deadline. The Township reserves the right to have the Building Inspector or other agent present at the time of repair. Solar panel support structures and/or foundations shall be constructed to preserve any drainage field tile or system.

~~t.p.~~ Transfer or Sale: In the event of a transfer or sale of the Facility, the new owner or operator must notify the Township in within 30 days, and the Zoning Administrator shall administratively amend the permit to name the new owner or operator. Upon transfer or sale, the cash bond shall be transferred to the new owner or operator and shall be maintained at all times, the estimated costs of decommissioning shall be resubmitted, and the security bond adjusted to account for the new estimate.

(37) Abandonment and Decommissioning: Following the operational life of the project, the Applicant shall perform decommissioning and removal of the Utility Solar Energy System or Facility and all its components and restore the site to its original conditions.

- a. The decommissioning plan shall be written to provide security to the Township for one hundred twenty-five percent (125%) of the cost to remove and dispose of all panels, wiring, and restoration of the land to its original conditions. The value of decommissioning shall be determined by a third-party financial consultant or engineer selected by the Township and paid for by the developer. The decommissioning security

shall be paid in cash to the Township. Once value of decommissioning is determined, it shall be updated on a periodic basis of not less than every three (3) years and additional security may be required on the basis of the average inflation rate of the preceding three (3) years.

- b. All abandonment and decommissioning work must be done when soil is dry or frozen to prevent compaction.
 - c. Solar energy systems that are not operated for a continuous period of twelve (12) months shall be considered abandoned and shall be subject to removal proceedings.
 - d. Solar energy systems that are damaged shall be replaced or removed within seven (7) days.
 - e. The ground must be restored to its original topography within three hundred sixty-five (365) days of abandonment or decommissioning. An extension may be granted if a good faith effort has been demonstrated and any delay is not the result of actions or inaction of the operator. An alternative topography can be approved by the Township as part of the original site plan review or later as part of decommissioning.
 - f. If land balancing is required, all top soil will be saved and spread evenly over balanced area.
 - g. An annual report shall be provided to the Zoning Administrator showing continuity of operation and shall notify the Zoning Administrator if use is to cease, prior to decommissioning, or abandonment.
 - h. Continuing Obligations: Failure to keep any required financial security in full force and effect at all times while a Utility Solar Energy System or Facility exists or is in place shall constitute a material and significant violation of the Special Land Use, Special Use Permit, and this Ordinance, and will subject the Utility Solar Energy System or Facility Applicant, owner, and operator, jointly and severally, to all remedies available to the Township, including any enforcement action, civil action, request for injunctive relief, and revocation of the Special Land Use Permit.
 - i. The Applicant shall be responsible for the payment of all attorney fees and other costs incurred by the Township in the event that the structure is not voluntarily removed and the Township has to enforce removal.
- (38) Complaint Resolution. Utility Solar Energy Systems or Facilities shall provide a complaint resolution process, as described below.
- a. The site shall have signs posted with contact information to collect complaints related to the Utility Solar Energy System or Facility.
 - b. A log shall be kept by the owner or operator of all complaints received and shall be available to Township officials for review, per Township request.
 - c. The operator or its agent shall respond to complainants within ten (10) business days and shall provide notification to the Zoning Administrator.
 - d. Any resolution shall include lawful and reasonable solutions consistent with the Zoning Ordinance, which shall also be provided to the Zoning Administrator.

- e. The operator or its assigns reserve the right to adjudicate any claims, including residential claims, in a court of competent jurisdiction. An annual report shall be submitted to the Zoning Administrator and the Township Board that details all complaints received, the status of complaint resolution, and actions taken to mitigate complaints.

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
June 12, 2023**

MINUTES

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:40 p.m. Present were Chris Grajek, Diana Lowe, Marianne McCreary, Eric Rauch, Tim Chouinard, Jeff Dhaenens and Glynis McBain. Also present was Planning Director Amy Ruthig, Brian Borden of Safebuilt and Shelby Byrne of Tetra Tech.

Chairman Grajek stated there is an incident on Grand River where the road is closed, so the meeting was delayed to allow one commissioner and any members of the public to arrive who may have been detoured.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Moved by Commissioner Dhaenens, seconded by Commissioner Lowe, to approve the agenda as presented. **The motion carried unanimously.**

DECLARATION OF CONFLICT OF INTEREST: None

CALL TO THE PUBLIC:

The call to the public was made at 6:41 pm with no response.

OPEN PUBLIC HEARING # 1... Consideration of special land use application, environmental impact assessment and sketch plan to allow for a proposed Bed and Breakfast located at 7854 Collingwood Drive, just west of Grand River Avenue. The request is petitioned by Nazmiye Yapici.

- A. Recommendation of Special Use
- B. Recommendation of Environmental Impact Assessment (5-14-23)
- C. Recommendation of Sketch Plan (5-17-23)

Ms. Yapici stated she would like to change her finished, walk out basement to a bed and breakfast. She has seen the review letters and believes there was a misunderstanding in the Fire Marshal's letter as the building department told her since there is an egress from the basement there does not need to be an egress from the bedroom. She has not spoken to him about the size of the one bedroom. She will comply with the other requirements.

Mr. Borden reviewed his letter dated June 6, 2023.

1. Special Land Uses (Section 19.03):

- a. The special land use standards of Section 19.03 are generally met.
- b. He requests the applicant provide the Township with their policies and rules to help mitigate disruptive guests.
- c. In order to make favorable findings related to compatibility and impacts, the use conditions of Section 3.03.02(b) need to be met to the Commission's satisfaction.
- d. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

2. Use Conditions (Section 3.03.02(b)):

- a. The applicant must provide information demonstrating that the site can accommodate four parked vehicles outside of the required front yard setback, which is 40 feet.
- b. He was unable to identify any other bed and breakfast inns within 300 feet of the site; however, if there are concerns, the Commission may require additional information from the applicant.
- c. He is requesting the applicant add a statement to the application form or Impact Assessment acknowledging that meals and other services are only available for residents, guests and/or employees.

3. Sketch Plan Review:

- a. He is requesting the applicant explain how refuse removal will be managed.
- b. If the fencing depicted is proposed, he requests the applicant provide details and the applicant will need to obtain a separate fence permit.

Ms. Byrne reviewed her letter dated June 7, 2023.

1. The sketch plan is missing the following required sketch plan contents, such as a legal description of the property, existing building and parking dimensions, and setbacks.
2. The application notes that the new use will use the existing well and septic on site. The petitioner should provide documentation from the County Health Department documenting the suitability of the existing septic system for the increased use.

The Fire Marshal's letter dated June 5, 2023 states:

Unless modification of the proposed plan occurs under the design of an architect, and the residence provides a code compliant habitable space, the fire authority does not recommend approval of this special land use for the following reasons:

1. The interior-most bedroom is too small to be considered a bedroom per code. The minimum square footage is 70 square feet for a habitable room.
2. The basement bedrooms are not provided with required emergency escape and rescue openings as required. There are no escape/rescue openings proposed on the sketch plan.
3. Smoke alarms shall be provided in each of the basement bedrooms as well as the common area outside the bedrooms. The alarms shall be hardwired with battery backup and interconnected the smoke alarms installed in the primary residence.

4. Carbon monoxide alarms shall be installed within the common area of the residence and shall be hardwired with battery backup.
5. A minimum of one 10lbs. ABC dry chemical fire extinguisher shall be provided in the basement for occupant use. It shall be installed in an open and conspicuous location.

Chairman Grajek suggested that the applicant request to have this item tabled this evening due to the many outstanding requirements from the planner, engineer and fire marshal.

Ms. Yapici stated she has updated her application to address many of the planner's concerns. She has information from the health department regarding the septic system.

The call to the public was opened at 7:00 pm.

Mr. Jeff Koziara of 7806 Collingwood Drive asked if this could be a legitimate business in this area. He is not in favor of this. It is currently a quiet neighborhood.

An email was received on June 9, 2023 from David and Lisa Johnson of 7861 Herbst Road stating they are opposed to this request because they feel it will reduce their privacy and decrease the value of their property.

The call to the public was closed at 7:03.

Commissioner Chouinard would like to see more information on the egress window in the bedroom. This is going to be required by the building department and the fire department.

Commissioner Dhaenens asked who Ms. Yapici envisioned to be her customers. She stated there are people who are at the cancer center, the dialysis center, etc. in the area. He agrees with the requirements of the planner, engineer and the fire marshal. These issues must be met at the time this item is before the Commission again.

Commissioner McCreary advised the applicant that the requirements do not have to be completed prior to the next meeting, but there must be a commitment and plan to comply with those requirements.

Moved by Commissioner Lowe, seconded by Commissioner Dhaenens, to table the request for a special land use application, environmental impact assessment and sketch plan to allow for a proposed Bed and Breakfast located at 7854 Collingwood Drive, just west of Grand River Avenue for Nazmiye Yapici until the July 10, 2023 Planning Commission Meeting. **The motion carried unanimously.**

OPEN PUBLIC HEARING #2...Consideration of a Planned Unit Development agreement, final PUD site plan and environmental impact assessment to allow for 204 apartment units. The

property consists of two vacant parcels with parcel ID numbers 4711-11-300-014 and 4711-14-100-002 located on the southeast corner of Grand River and Dorr Road. The request is petitioned by Grand River Dorr, LLC.

- A. Recommendation of Planned Unit Development agreement
- B. Recommendation of Impact Assessment (5-3-23)
- C. Recommendation of Final PUD Site Plan (5-30-23)

Mr. Mark Kassab of Grand River Dorr, LLC and Mr. Jonathan Curry of PEA Group, the engineer, were present.

Mr. Kassab stated they have done and submitted an updated traffic study to include the hospital, they have spoken to the Drain Commissioner and Livingston County Road Commission regarding the storm water runoff, they spoke to the Township's DPW and have agreed to contribute toward the upgrade of a sewer pump station, they have moved the setbacks further away from Grand River, and they have added the wetland delineation signage.

Mr. Curry stated they are not discharging any more runoff onto Grand River than what it is currently and the drainage on the back of the site is oversized.

Mr. Borden reviewed his letter dated June 6, 2023. He noted that since the previous review letter, the applicant has addressed almost all his concerns.

1. The applicant must provide a revised PUD Agreement addressing comments provided to date.
2. Building design, materials, and colors are subject to review and approval by the Planning Commission; however, they are generally consistent with the approved conceptual PUD plan.
3. He requests the applicant add the Dorr Road sidewalk connection and crosswalk to the overall site plan. It is depicted on the landscape plan. Ms. Byrne noted that the Road Commission did not want that sidewalk installed as it does not lead to another sidewalk. After a brief discussion, the Commissioners requested that Township staff speak to the Road Commission to see if they will agree to allow the installation of the sidewalk.
4. The applicant must address any additional comments provided by the Township Engineer and/or the Brighton Area Fire Authority with respect to vehicular circulation and site engineering.

Ms. Byrne reviewed her letter dated June 7, 2023.

1. A private road is proposed. After final site plan approval, private road construction plans should be submitted to the Township for review and approval.
2. The petitioner has submitted plans to the Livingston County Drain Commissioner (LCDC) for review and approval. Comments in their letter dated May 9, 2023, should be addressed and approval from the LCDC should be obtained. Since remaining comments from LCDC are not major, we believe the drainage plan is adequate for Planning Commission and Board

approval. Approval from the LCDC should be provided to the Township prior to a Land Use permit being issued.

3. The petitioner is proposing multiple connections to the existing storm sewer on Grand River Avenue. The LCRC will need to approve all proposed connections to their storm sewer system and said approval should be provided to Genoa Township prior to a Land Use permit being issued.
4. The grading plan shows areas with slopes exceeding 1:4. Planning Commission approval is required for 1:3 slopes. Steeper slopes are required on this site due to the large change in grade across the site and the SESC plan shows soil erosion control blankets on all slopes exceeding 1:4; therefore, we have no objection to the 1:3 slopes.
5. The petitioner is proposing multiple retaining walls up to 14-feet high. Genoa Township's Zoning Ordinance requires that retaining walls over three feet tall be designed by a professional engineer, with design calculations demonstrating its structural stability being submitted as part of the site plan. This should be provided prior to a Land Use permit being issued.
6. Tetra Tech completed a utility study for the proposed development and recommended connection locations and necessary system improvements for both the proposed water main and sanitary sewer. The petitioner has included our recommendations in their utility plan and has agreed to pay for a portion of the recommended sewer collection system upgrades.
7. After final site plan approval, the petitioner will be required to submit construction plans to MHOG Sewer and Water Authority for review and approval of the proposed water main and sanitary sewer.

The Fire Marshal's letter from May 16, 2023 stated the following.

A minimum vertical clearance of 13½ feet shall be maintained along the length of all apparatus access drives. This includes but is not limited to porte-cochere, lighting, and large canopy trees. A number of trees must be relocated, the species modified, or the road width increased to not overhang the roadways. A note was provided to address plantings at final site and construction review on the previous submittal; however the artist rendering indicates over 400 large canopy trees lining the roadways throughout the development. As they grow and reach full growth, nearly all species will either partially or completely encroach the roadway. Additional consideration shall be made to placement and species and will require the ownership to include the overhead clearance requirement in the facility maintenance plan. The applicant remains committed to addressing the tree canopy concerns prior to construction approval through modification of locations and species of the trees. The Fire Authority did present an increase in drive width to 32 feet as an alternative.

Mr. Kassab stated they have spoken to the fire marshal and have agreed to plant a different type of tree that will not cause issues for their apparatuses.

Mr. Kassab stated he has received the letter from Ms. Kim Hiller of the Livingston County Road Commission dated April 21, 2023.

Commissioner Dhaenens thanked the developer for making the changes that were requested.

Commissioner Rauch agrees with Commissioner Dhaenens. Regarding the detention pond at the corner of Dorr Road and Grand River, noting it will not be a wet pond, and while there is a retaining wall and landscaping proposed, he was wondering if there could be something added to dress it up, such as signage for the development on top of the retaining wall. Mr. Kassab agrees and is willing to discuss it further with the township.

It was noted that the colored renderings and building material samples were included in the preliminary site plan submittal and are acceptable to the Planning Commission.

The call to the public was opened at 7:38 with no response.

Moved by Commissioner Rauch, seconded by Commissioner Dhaenens, to recommend to the Township Board approval of the Planned Unit Development agreement to allow for 204 apartment units on two vacant parcels with parcel ID numbers 4711-11-300-014 and 4711-14-100-002 located on the southeast corner of Grand River and Dorr Road for Grand River Dorr, LLC, contingent upon the following:

- The applicant shall address the conditions comments provided in the review letters of the engineer, planner, fire marshal, Drain Commissioner, and Livingston County Road Commission.

The motion carried unanimously.

Moved by Commissioner Rauch, seconded by Commissioner Lowe, to recommend to the Township Board approval Impact Assessment dated May 3, 2023 to allow for 204 apartment units. on two vacant parcels with parcel ID numbers 4711-11-300-014 and 4711-14-100-002 located on the southeast corner of Grand River and Dorr Road for Grand River Dorr, LLC. **The motion carried unanimously.**

Moved by Commissioner Rauch, seconded by Commissioner Dhaenens, to recommend to the Township Board approval of the Final PUD Site Plan dated May 30, 2023 to allow for 204 apartment units. on two vacant parcels with parcel ID numbers 4711-11-300-014 and 4711-14-100-002 located on the southeast corner of Grand River and Dorr Road for Grand River Dorr, LLC, contingent upon the following:

- The building design materials and colors presented in the preliminary site plan submittal are acceptable to the Planning Commission
- The Planning Commission requests that township staff and applicant work with the Livingston County Road Commission to determine if they will agree to allow the installation of the sidewalk along Dorr Road as depicted on the plan.
 - The applicant shall address the conditions comments provided in the review letters of the engineer, planner, fire marshal, Drain Commissioner, and Livingston County Road Commission.

- The Planning Commission approves the deviation for the height of the retaining wall for the detention pond on the northwest corner of Dorr Road and Grand River.
- The petitioner shall work with township staff to understand opportunities to add signage or entry features at the northwest corner of Dorr Road and Grand River.

The motion carried unanimously.

OPEN PUBLIC HEARING #3...Discussion regarding proposed solar ordinance

Mr. Borden presented the proposed amendments to the township's solar energy systems ordinance.

Commissioner Dhaenens understands the township's desire to not have solar panels allowed in the front yard; however, in some cases, the front yard is the only location for it to be effective. Mr. Borden stated there are some conditions and zoning districts where they are allowed in the front yard.

There was a discussion regarding the requirements regarding property size, setbacks, etc. and if any properties in the Township meet them. Commissioners were asked to send their comments to Ms. Ruthig, and Ms. VanMarter so they could address them and return to the Planning Commission with a final draft of the ordinance.

ADMINISTRATIVE BUSINESS:

Staff Report

Ms. Ruthig stated there will be two items on July's meeting agenda.

Approval of the May 8, 2023 Planning Commission meeting minutes

Moved by Commissioner McCreary, seconded by Commissioner Rauch, to approve the minutes of the May 8, 2023 Planning Commission Meeting as presented. **The motion carried unanimously.**

Member Discussion

There were no items to discuss this evening.

Adjournment

Moved by Commissioner Dhaenens, seconded by Commissioner McCreary, to adjourn the meeting at 8:06 pm. **The motion carried unanimously.**

Genoa Township Planning Commission
June 12, 2023
Unapproved Minutes

Respectfully Submitted,

Patty Thomas, Recording Secretary

DRAFT